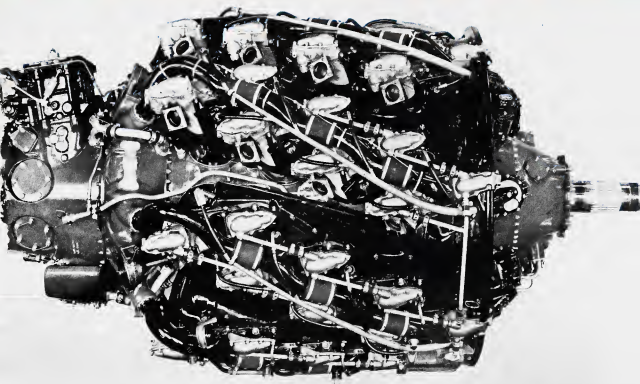


# Aviation News

McGraw-Hill Publishing Company, Inc.

DEC. 3, 1945



**Powerhouse**—Selected to power five of tomorrow's giant air transports is this Pratt & Whitney Wasp Major, 28-cylinder, four-row radial air-cooled motor which delivers more than 3,650 combat hp. In addition the engine is being used in two of the Navy's crack fighters, two of the Army's largest bombers and at least six other military aircraft not yet announced.

## **NAA Forum Urges Better Private Flying Policies**

"Honest thinking" in development called for by speakers in outlining steps to be followed if personal aviation's potential is to be realized...Page 7

## **Navy Base Trying Out All Fog Dispersing Methods**

FIDO system's cost cut to \$200 per landing; sonic devices, water jets and hot air all are scheduled for tests at Arcata, Calif.; airline interested....Page 12

## **British Warplane Procurement Is Double That of U. S.**

No extensive demobilization set up; 900,000 workers in industry which has orders on hand for more than 10,000 military aircraft.....Page 13

## **Subcontractor to Build Fairchild F-24's in Texas**

Robert McCulloch, former manager there for North American, heads new company; parent concern will handle sales.....Page 16

## **Admiral Land Likely to Be Named President of ATA**

Rep. Ramspeck elected vice-president; Maritime Commission chairman's resignation reliably reported already at White House.....Page 42

## **Non-Scheduled Transport Curb Seen After CAB Hearing**

Board expected to follow examiners' recommendations; operators present their case in unprecedented strength and harmony.....Page 41

Combined for the first time

# JET + PROPELLER

Doing the "Can't Be Done" in  
Climb  
Maneuverability  
Speed

**THE NEED:** A carrier-based combat plane combining the advantages of jet propulsion for peak performance... plus piston-engine and propeller power for short take-off and long range.

**THE EXPERTS** said "It can't be done." But the Navy and Ryan, working together, tackled the problem and solved it... in the first design.

**THE RESULT:** The most successful application of jet propulsion yet worked out.

- The only jet plane which can operate from aircraft carriers.
- New high performance—superior maneuverability, speed and climb—over widest range of altitudes.
- Best combination of desirable fighter characteristics, each with its relative degree of importance to the others.
- Transcendental emergency power when both engines are used together.
- Advantages of two engine airplane in single-engine configuration.
- A plane which gives pilot combat advantage at all times.

RYAN AERONAUTICAL COMPANY • SAN DIEGO



D. B. MARY'S NEW JET PLANE

## THE AVIATION NEWS

### Washington Observer



**RECORD FLIGHTS**—The record long-distance flight of the Boeing B-29 from Guam to Washington is reported to be only the beginning. The AAF is said to be out to break all existing records possible with American aircraft. The British jet work, plus some subsonic and see too quiet comment about the Lockheed Blasting Star using the AAF high command. The B-29 distance work will not be the last, since the British are reported readying for London-Australia non-stop. But at least two American planes can top any British distance mark. And the jet speed record will be one of the records the AAF will smash.

**NO SQUEEZE**—Responsible opinion in Washington now is that the U. S. will not use requests from foreign nations for food, clothing and other necessities as levers to bargain for air rights. That policy, if it is a policy, however, will stop when the relief requested takes the form of pleas for financial assistance. When talking money, officials feel the U. S. is justified in asking for commercial rights.

**FEW DISPUTES**—Most important countries where rights still must be obtained are France, Russia and England, the latter being the site of airlines which might be principally involved. Departments of Commerce reported last week that U. S.-built airlines during the war totaled 466, carrying 51,697,566,000, with many of them in one-of-the-way upon which would serve as commercial end.

**RUSSIA WILL PLAY**—Officials anticipate no serious difficulty in coming to a freedom of transit agreement with Russia, which it becomes necessary.

Informed explanation of Russia's non-appearance at the international air conference in Chicago is that the Soviet's absence did not indicate lack of interest or willingness to participate, but merely that Russia realized the U. S. and Britain could not agree on basic principles and saw no point to becoming involved in a bilateral argument.

**FOREIGN AIRPORTS**—Few foreign airports, other than those built by the AAF, will meet American airline requirements, and domestic companies operating in the foreign field possibly will have to make large investments in facilities to meet American operating standards. Many of the largest foreign fields do not even meet minimum Chicago Conference standards, and local governments are reported showing little disposition to meet them.

**OCCUPATIONAL DEFERMENT**—With the war over the Army and Navy are on record as having discontinued sponsorship of occupational deferments of workers in plants manufacturing equipment for the services. It probably will be denied, but despite this announced policy, both services continue from time to time to intervene in behalf of key workers.

**MONTHLY PRODUCTION REPORTS**—Although it still is in the planning stage, a subcommittee of the Air Coordinating Committee will be set up within a few weeks to make a monthly overall report on aircraft production. Since V-J Day there have been no overall figures available from the Government, except on military craft. It is probable that the Great Britain will compile the report.



This Northrop Flying Wing jet bomber carries its explosives in the wing. (See Page Ten)

## THE STAFF

GEORGE W. PHELPS, *Executive Publisher*  
 EUGENE H. WOODWARD, *Editor*  
 C. SCOTT HENNING, *Managing Editor*  
 MICHAEL H. MICHAEL, *Transportation Editor*  
 LAMARCO CHODER, *Transport*  
 MARY MARLINE PERKINS, *Guest Advisor*  
 WILLIAM KROGER, *Special Assignment*  
 ELAND FURBERG, *Special Assignment*  
 SCOTT BARNES, *Public Cost Editor*  
 ALAN McSHANE, *Public Policy Editor*  
 J. K. VAN DINE, *Public Policy Editor*  
 DALLAN MILLER, *Aviation Director*  
 ROBERT W. MARTIN, *Sales Manager*

## CONTENTS

	PAGE
Washington Observer	3
Industry Observer	5
Aviation News Service	7
Power Plant	10
Production	12
Personnel	24
Transport	31
Special Air Service	37
Discussion	40
Editorial	59

## THE PHOTOS

Thomas White, SP, International News Service, NY

**Editorial Headquarters,**  
 10740 Sunset Blvd.,  
 Westwood 4, D. C.  
 Publications and Executive Offices,  
 200 E. 42nd St., N. Y. 17, N. Y.  
 Pacific Coast Office, 411 So. Flower St., Los Angeles  
 National Office, 1000 N. 17th St., Seattle, Wash.  
 Chicago Office, 100 N. Dearborn St., Chicago 10, Ill.  
 Dallas Office, 1000 Ross St., Dallas 10, Tex.  
 Denver Office, 1000 17th St., Denver 10, Colo.  
 Houston Office, 1000 17th St., Houston 10, Tex.  
 Kansas City Office, 1000 17th St., Kansas City 10, Mo.  
 Miami Office, 1000 17th St., Miami 10, Fla.  
 New Orleans Office, 1000 17th St., New Orleans 10, La.  
 Philadelphia Office, 1000 17th St., Philadelphia 10, Pa.  
 Portland Office, 1000 17th St., Portland 10, Ore.  
 San Francisco Office, 1000 17th St., San Francisco 10, Calif.  
 St. Louis Office, 1000 17th St., St. Louis 10, Mo.  
 Tulsa Office, 1000 17th St., Tulsa 10, Okla.  
 Wichita Office, 1000 17th St., Wichita 10, Kan.

Volume 4, Number 10

## Advertiser Index

Air Service Inc.	25
Air Transport	25
Big Water Corp.	2nd cover
Consolidated Diesel Fuel Co.	49
Detroit Corp. Ltd.	49
General Electric Co.	49
Harris Company	49
Kellogg International Co.	49
McGraw-Hill Companies, Inc.	27
Motors Inc.	49
Motors Aircraft, Inc.	49
Norfolk Aircraft Service	28
Pack Food Co. Inc.	49
Ryan Aircraft Co.	2nd cover
Sealed Air Corp.	49
Shell Oil Company	34
United Oil of California	33
United Oil Service Co., Inc.	33
Van & Wagon	4
Western Air Lines, Inc.	4
Western Electric Co.	49

## News at Deadline

## Airport Legislation

Prospects for enactment of airport construction legislation before the end of the year appear dim with House and Senate committees making little progress in ironing out the Senate-passed McCarran bill and the House-passed Lee measure. Little was done at the first meeting and the second meeting last week was dominated because of lack of quorum.

Senator McCarran remained hopeful for early completion but there were deliberations over the methods of funding federal airport loans to states and municipalities.

## Tipton Resignation

Friends of Stuart G. Tipton, counsel and acting president of Air Transport Association, say he may retire from the organization after the first of the year. He is understood to have been offered a position with United Air Lines and may take that or return to private practice.

## Research Indorsed

A resolution adopted by the International Association of Machinists (IAM) calls upon Congress to enact legislation to allow the air forces to proceed with a post-war program embodying fast experimental and continuing technological improvements in the latest type aircraft.

The National Grange also recommends sound programs directed toward the development of aviation, including adequate research and development.

## AA Contract Program

American Airlines is announcing their entry into non-scheduled contract carrier operations, using C-54's, five of which are available now for the service, with more being added later. Initial contract is with Northwest magazine, effective this Wednesday. AA will fly the magazine's West Coast editions from Dayton, Ohio, to afford distribution on the West Coast simultaneously with other sections of the country.

First load will be 65,000 copies of the magazine, constituting the maximum payload, 10,500 lbs., of the aircraft.



Signature Juan, Colonial Airlines president, last week duly denied an Aviation News story of Nov. 19 that purchase of Colonial by Eastern Air Lines was in the making.

Whittling down as backlog of unsold stock applications, CAB shortly will release decisions in two more international cases.

Industry expects IAPC to issue its next report on plant disposal this week, covering September, October and November. Monthly reports hereafter are anticipated.

Election of Joe E. Crosson, veteran Alaska flyer, as president of Northwest Air Service, Inc., is accompanied by the announcement that the Seattle firm now is wholly owned locally. Stock held by Charles H. Bobb, Glendale plane dealer, has been bought by four Seattle men—Dallas Dossan, lumber dealer, Thomas H. Olsen, insurance broker, John Hely, dress manufacturer, and Chris Gilma, vice president of Seattle Chamber of Commerce. Balance of stock is held by Elmore and Noel Wain, former Alaska pilot who brought into the firm in 1944.

Opening of Idlewild Airport, scheduled for Dec. 2, has been postponed indefinitely because of labor disputes.

United Air Lines has contracted with Northrup for modification of 35 C-47s, work to start through February.

National Aeronautic Association is studying a plan for making awards to airports which meet certain standards in cleanliness and good service to customers, a project similar to the "Good Housekeeping Seal of Approval" or the American Automobile Association's approved service station list.

Naval Air Transport Service now weighs the service life of its regularly overhauled transports as five years, a critical decision, but still subject to the domestic airlines' depreciation policy on old Douglas.

Navy is attempting to complete its contract with Lockheed for the PV-2, but re-examine a partial order. This is one of the models which has required extensive modification at the Navy Lockheed service center at Burbank. PV's not modified by the end of the year are scheduled to be kept off the line. About 100 remain to be delivered from Lockheed on the contract.

A revision in Navy's Martin Mover schedule will reduce the number of monthly deliveries in 1946 to two, with the contract running through June, 1947. November schedule of five will be met.

Douglas' new Navy dive bomber, the BT-2D-1, is expected to be ready for use shortly, the first plane being reported as completed, with a Pratt & Whitney R-3500 engine.

Martin's experimental patrol plane for the Navy, the XPM-1, is making satisfactory progress, with initial test flights now scheduled for early spring.

Navy has about 3,500 torpedo bombers of the Grumman type made by General Motors' eastern branch—TBM-3—which has gone out of production. Spare replacements will probably be made on this basis by combination.

CNA finally is studying a proposal made by the airlines to permit carrying of mail and cargo in unaccompanied C-54 military transports.

Effective Dec. 15 Colonial Airlines will permit passengers to carry as much as 10 lbs. of baggage free if it is sports equipment.

TWA last week chartered a new continental twin-engine twin-engine plane for a Coast-to-coast flight from Gunder, Newfoundland, to Roosevelt, Rm, in 6 hours, 35 minutes, averaging 297 mph.



# ...FOR INTENSIVE COVERAGE OF OUR SWIFTEST GROWING TRANSPORTATION MARKET

In the span of less than 20 years a new, major transportation industry has been developed—by flying you have new business and marketing possibilities. Air transport has taken its place alongside the rail road, marine and automotive industries as one of our great public carriers of people and cargo.

Air Transport serves the business and pleasure of this swiftly growing industry—and serves them to the exclusion of all other interests. Among Air Transport's 10,000 paid subscribers you find the authoritative heads, operators and the maintenance and overhaul executives, engineers, designers and their key supervisors and personnel—the financial and legal advisors who back them—the military and government authorities who promote air transport expansion—the planners and builders of the \$500,000,000 program for airport and airway facilities—the transport manufacturing executives and the key men of thousands of manufacturing suppliers to the industry.

Within its first year, Air Transport has become the leading authority in its industry. To the extent that air transport's key men have fully subscribed to its 10,000 paid (A.I.C.) circulation. This is a record of unusual significance (1) because circulation is carefully confined to aviation men, aircraft and parts manufacturing executives, military and government authorities and (2) because Air Transport's subscription price is \$3 a year rather than the traditional \$5.

To you Air Transport offers direct and intensive advertising coverage among the builders of this specialized business.

**FREE** New Facts Book on Air Transport Markets. Read the story of your business opportunity in this fastest expanding transportation industry. Write today for your copy.



Cover All The Bases With

**AIR TRANSPORT • AVIATION • AVIATION NEWS**

Johnson Hill Publishing Co., Inc., 101 W. 42nd St., New York 14, N. Y.

## 3500 horsepower—plus



Pratt & Whitney Aircraft again leads the way to higher horsepower. The new Wasp Major is the most powerful aircraft engine in production in the world—delivering 3500 horsepower—plus. Already it has been selected to power such air-giants as the Boeing Stratocruiser, Douglas Globemaster, Hughes Hercules, Martin Mars, Republic Rainbow and Consolidated B-36 as well as the F2G Goodyear Corsair and eight Army and Navy aircraft not yet publicly announced.

### PRATT & WHITNEY AIRCRAFT

EAST HARTFORD, CONNECTICUT

ONE OF THE FOUR DIVISIONS OF UNITED AIRCRAFT CORPORATION

## NAA Conference Brings Demand For Better Private Flying Policies

"Honest thinking" in development urged by speaker in pointing out steps which must be followed if personal aviation's potential is to be realized

By ALEXANDER MCGURELY

Demands for "honest thinking" in personal aviation development and for more attention to the needs of the non-professional, "poorly-want" flyers who may be expected to make up the large majority of future personal aircraft users echoed from the Statler Hotel in Washington last week when the first post-war Conference on Private Flying was held under sponsorship of the National Aeronautics Association.

If the aviation industry is to go beyond its present limited distribution of private planes it must make a greater effort to satisfy the potential consumer who has neither the time nor the money to spend in learning to fly today's conventionally controlled aircraft. Rosabeth Gordon, managing editor of *Flight* magazine, and a student pilot with approximately 50 hours of flight, told the conference. Comparing her experience in first soloing an Evektor in less than five hours, with her later flight training in various conventional control planes, Miss Gordon worried that the average American woman will not take the time or the money to learn to fly the latter, when there were so many other competing interests which are also demanding.

► **Costs**—"You can get a very nice car for what it costs you to learn to fly, and what American girl isn't going to prefer to get a fur coat first?" she asked.

She believed the fewer number of hours required for simplified control airplane flight instruction and the lower cost will be an important factor in consumer satisfaction. She called for more comfortable planes in which the woman pilot can wear skirts. She re-emphasized the swelling private pi-

lot demand for clean airports and adequate restroom facilities with definite attention to making airport users comfortable in pleasant surroundings.

► **Capitalization**—"The policies which private flyers are demanding, must be provided by private capital, in the opinion of Hobb Gertel, Standard Oil Co. (N.J.), aviation sales director, another speaker at the conference. Gertel does not expect public funds—even through the national airport program and corresponding state programs—to provide more than a small percentage of the needed facilities which he estimates would eventually total about 30,000 landing areas of various kinds for the private flyer. A solution to financing problems was suggested in the form of an FMA to finance airport hangar, shop and other facilities for the operator.

Asked about the investments which some oil companies are making in airport development, Gertel replied:

► **Banks Seized**—"The banks simply won't play. Some petroleum companies have been willing to back good, sound Americans."

"Any operator unable to get funds has a perfect right to go to his suppliers and secure backing. However, the worst thing industry could do is back them too far, until you have the manufacturers owning all the service businesses. That would be tragic."

► **Design**—William B. Stout, Dearborn inventor and engineer, urged the aviation industry to stop adding itself and to stop doing business with itself. He called for more "honest thinking" in the line of meeting out the actual needs of potential plane users, and the tailoring of planes to fit these needs. Usability, range and economy must be improved, he urged.

He discussed possibilities of an all-plastic plane, now reported under development and predicted that aircraft engine costs would be curtailed to a volume level only when engines were developed which could be used interchangeably in autos and airplanes.

► **CAA Criticism**—"The reactionary 'Old Guard' in the Civil Aeronautics Administration came in for some harsh criticism during the conference. James W. Rutledge, legal counsel for the General Motors & Mechanics Association, told the conference the CAA is made up of two divergent groups.

"If the viewpoint on top were



### TWIN MUSTANG'S ARMAMENT:

Shing from a special shield in the center wing section of North American's Twin Mustang, its eight-gun noseless gives this unusual aircraft a total of 14 forward-firing 50-cal. machine guns. On the outer wing sections the plane packs two 1,000-lb. bombs and ten rockets. A 680-gal. droppable gas tank may be substituted for the machine gun noseless

selected at the way down we would have no quarrel with CAA," he declared. He characterized a group within the CAA, below the highest policy-making level, as "hard-boiled, highbrowed, inconsiderate and disinterested," and stated that the highest CAA officials take inventory of their personnel "to find out whether their views are being carried out."

► **Penalties**—Bachelor charged that the new regulations applying to private pilot flight constraints were being poorly administered and asserted that the practice of filing suit to collect a penalty for alleged violations of Civil Air Regulations was becoming "a mild form of legalized extortion." He urged need for legislation taking this arbitrary power from CAA.

Warning that private flying hazards must be reduced in the present phase can achieve real safety was given by Jerome Lederer, chief engineer, Aera Insurance Underwriters. Lederer predicted private flying deaths would reach a level of 10,000 annually in a few years, if the pre-war accident curve in aviation continued, as compared with 40,000 motor deaths a year pre-war. He charged private flyers with weakening national defense by not expanding its safety, and with being apathetic, since their own actions are responsible for the high accident rate that increases the cost of owning a plane.

► **Faults**—In 1944, 70 per cent of the reckless flying accidents were due to low flying, buzzing houses, stunting over populated areas, etc., he said, urging private flyers to cooperate in an educational campaign to point out the errors of such flyer practices to the offenders, and to complain about them to field managers. He also urged watchfulness about sloppy main-

## Certification Step

A plan which eventually is expected to permit 35,000 A & E mechanics to give annual inspections of aircraft and issue airworthiness certificates, a plan developed by the CAA, general inspection division, Paul Young, assistant chief of the division, told the NAA, Peoria Flying Club conference in Washington, last week.

Young said the plan should be ready for trial in about 30 days and that it was hoped as many as possible of the mechanics would qualify, thus cutting down delays now encountered in getting inspection certification of aircraft. Later Young told American News the mechanics who would give the inspections would be designated aircraft maintenance inspectors, and would be supervised by inspectors on their record and aircraft knowledge, without examination. Applicants are subject to approval by the regional administrator and the Washington office.

insurers and ground handling of planes.

Lederer called for improvement of personal plane designs, safety-wise, to provide:

► **Fuel**—aircraft accessible without removing seat, so as to insure clean fuel.

► **Better** visibility for flying and taxiing.

► **Redesign** of instrument panel and seat interior so that wheel or stick, and other interior fittings do not "become a weapon against the pilot in a crash."

► **Prohibition**—A five-point program which the industry is using to promote aviation was outlined

by Clarence F. Corbish, Indiana state aeronautics director. Recognition of airports in the state has been so successful that the number has increased from 14 in 1944 to 119 now, with 60 other airports now being developed, he reported. The state is expected to be completely air-minded by next summer. The department proposes to award a certificate of merit to the airports which meet certain minimum safety qualifications.

The state is setting up two advisory councils, one composed of private flyers, and one of commercial aviation representatives which will represent various sections of the state. Through local organizations responsible to each of these council members, the grass-roots sentiment of the aviation people of Indiana will be reflected to the state department in establishing policies and plans.

► **Subsidies**—"Civil aviation has sold its birthright for a federal subsidy," W. L. Jack Nelson, president of Service Aviation Corp., Indianapolis, former secretary of the CAA Private Flying Advisory Committee, told the conference.

Nelson pointed out that the federal subsidy to fight training programs which resulted in a large number of additional students being trained had resulted also in increasing federal restrictions over private flying. He urged the aviation industry to look "to our neighbors in our own communities" rather than the federal government for future financing and development.

Failure of aviation to establish proper "grassroots" activity throughout the various states was blamed by Nelson for such actions as the recent Kentucky "good roads amendment" which he said "prevents aviation in Kentucky for years to come" by limiting fuel tax expenditures to roads, regardless of their origin.

If sufficient interest in aviation in the local communities of Kentucky had been developed such a measure could never have succeeded, he declared.

► **Legislation**—Harry Maxwell, Air Transport Association state relations manager, reviewed state aviation legislation. Regarding that national interest was reflected in the fact that 2,000 aviation bills were presented in state legislatures in 1944-1945 sessions and more than 2,000 of these were passed as laws. Many of these were enabling acts to authorize local government units to finance air-

ports in their communities. He urged the importance of an aviation committee as an integral part of each state government, warning of a trend in some states to combine aviation with ground transportation interests to the detriment of aviation.

► **Airports**—Community effort to develop airports and airports based on local need and the financial ability of the community to pay, was urged by Eugene V. Fryhoff, head of the aviation division, Missouri State Department of Resources and Development. He appealed for elimination of friction between the various factions of aviation, and urged cooperation for the mutual interest of the industry. He described the Missouri program. (See Private Flying)

## Aviation Activity In House Stalled

Aviation activities of House Interstate and Foreign Commerce Committee are likely to be at a standstill until the new Congress meets in January, it was indicated last week by the committee's chairman, Rep. Clarence F. Lea (D, Calif.).

There are two matters Lea is anxious to act on before year's end, however.

► **Investigation**—First, he would like to get Rules Committee clearance to obtain approval of his resolution authorizing Interstate to make a thorough investigation into transportation, with a view to re-framing over-all national transportation policy and law. Lea said he would like to have authorization for the investigation by the first of next year. He has requested a hearing by Rules on his resolution, but unless this is resolved shortly, Lea's absence from Washington will prevent action.

All segments of the transportation industry, Lea stated, have submitted voluminous reports in response to his request for views and recommendations for use in the proposed investigation. Although a deadline date of Nov. 15 was set for submission of the reports, the Congressman said they are still welcome. Lea plans to have an investigating staff carefully review these documents, and probably have them published, prior to launching investigative hearings.

► **CAA Independence**—The other



DE HAVILLAND HORNET

This new low-range fighter is powered by two Rolls-Royce Merlin engines each of 2,675 hp. at take-off. It is equipped with eight horizontal, four-blade propellers. Top speed exceeds 470 mph. Rate of climb is over 4,500 ft. per sec. level and the plane has an operating ceiling of around 15,000 ft. With low-range tanks it has a range exceeding 2,500 miles.

## NATS Halts Cargo Flights

Naval Air Transport Service has discontinued cargo-only flights as unnecessary due to a decrease in the number of scheduled since the war ended. NATS pilots in training during the war flew such flights for experience before they carried passengers. All NATS flights now are carrying passengers as well as cargo.

Naval Air Transport Service has discontinued cargo-only flights as unnecessary due to a decrease in the number of scheduled since the war ended. NATS pilots in training during the war flew such flights for experience before they carried passengers. All NATS flights now are carrying passengers as well as cargo.

## Noted Flyers Head Airport Firm

Two of World War II's most famous Marine Corps flyers head a newly organized California corporation, Community Airports, Inc., which will begin aggressive development of airports for civilian use.

They are Col. William J. Fox, who was commandant of Henderson Field during the critical defense of Guadalcanal, and Maj. Joseph J. Fox, at one time America's leading ace with 35 Japs bagged in combat. Fox is president and chairman of the board of the corporation, and Fox is vice-president. Other officers are Raymond D. Dickman, Vernon, Calif., real-estate broker, director; Floyd Weller, Los Angeles attorney, secretary-treasurer, and Jack English, Los Angeles attorney, broker.

► **Project**—Fox said that with a corporate capitalization of \$2,500,000 Community Airports will seek to develop airport lands for maximum utility and serve to

all types of aviation enterprises, and especially will seek to develop residential areas on properties adjoining airports for the convenience of personal aviation owners.

The corporation already has filed with the War Department and SEC notice of its interest in acquiring military airports and flight strips as rapidly as they are declared surplus.

► **Background**—Fox is widely known as a combat ace in Southern California, and was the nation's active duty ace from the Marine Corps Reserve was chief engineer of the Los Angeles County Regional Planning Commission. He resumed that post after the first of the year.

Prior to the war Fox directed preparation of Los Angeles County's first master plan of airports, and at that time pleaded with little success against the conversion of airports to industrial and subdivision properties.



NAVY V-1A-1 JET

Cruisery view of the Westinghouse Yankee jet engine built for the Navy. This unit, which has a diameter of only 19 inches, and its companion 9-inch diameter "baby jet," are the first mass power plants of entirely American design.



**Flying Wing Buzz Bomb:** This twin-jet missile was the first Northrop aircraft sent into buzz bomb production for Army testing. It carried its explosive charges in the bulges in the wing. This model later was shifted in favor of the single-jet JB-1A which carried the explosive inside the wing itself.

## Mobile Buzz Bombs Built By Northrop

Flying wing type can be launched in 50 ft. by use of soccer-powered dials.

War-time development of buzz bombs by Northrop Aircraft, Inc., has turned that type of guided missile into an important mobile warfare company affairs have revealed, and further demonstrated the efficiency of the firm's Flying Wing design.

The first model turned out by Northrop was a twin-jet model with both jets drawing air from a central intake duct. It carried its explosive charge in bomb-like bulges in each wing.

**Later Model:** Following experiments with this model Northrop switched to a single-jet model which also had the power unit designed as an integral part of the wing (See Page Three). Its 3,750 lb. of explosive were carried in cast magnesium sections inside the wing adjacent to the power section. The contract, Northrop says, are among the largest ever produced.

The new model, designated the JB-1A, weighs about 7,000 lbs. and has a 35-ft. wingspan. It has an effective range of more than 100 miles at a speed of 330-400 mph, depending on fuel and explosive load. The craft is fabricated of aluminum and magnesium, using a special Northrop-designed "Mellarc" welding process on the inflammable magnesium. It used a German-type shoddy jet built by the Ford Motor Co.

**Launching:**—The German method of launching was followed in first experiments with the buzz bomb, using 300 ft. of standard railroad track. Dismantled with the result, Northrop engineers redesigned the launching slide and came up with

## RFC Sells Plant For \$13,750,000

International Harvester Co. purchases Illinois engine parts plant previously operated by GM.

In the largest transaction of its kind in auto, Reconstruction Finance Corp. has sold the engine parts plant at Melrose Park, Ill., operated during the war by General Motors Corp., to International Harvester Co. for \$13,750,000.

The sale has attracted considerable industry attention, not just because of the size of the property involved, but because of the terms and other conditions which apparently influenced the disposal agency's decision.

**Makeover:**—While the plant itself was built at a cost of \$17,384,669, it contains machinery valued at an additional \$64,255,993. International Harvester is not buying any of the machinery, which will be removed from the plant at Government expense.

Another factor which is believed to have had some bearing on the sale is the fact that the company plans to employ some 5,500 people in the production of diesel engines, power units, tractors, etc., and most of these workers will be recruited locally.

The surplus plant disposal regulation provides that locally-owned enterprises or companies giving employment to local workers shall be given special consideration.

**Equipment:**—Among the equipment which will be removed and offered for sale by RFC are 55 aircraft motor test blocks which cost approximately \$4,990,000, and 3,393 machine tools.

In trying to dispose of an estimated \$10,990,000 worth of surplus aircraft and parts plants, RFC has recently issued announcements on several large facilities. Up for sale are two plants operated by Curtiss-Wright—in the Wright Experimental plant at West Ridge, N. J., which contains 1,860,890 square feet and covers 186 acres. Also on the list are two plants formerly operated by United Aircraft at Bridgeport and Sturbridge, Conn.

## Pratt & Whitney Wasp Major To Power Five Giant Transports

Engineers believe huge motor, expected to be used also in at least six still-secret warplanes, has possibilities beyond its present rating of 3,650 combat hp.

Details of Pratt & Whitney's Wasp Major, which delivers in excess of 3,450 combat hp, have just been disclosed, along with the announcement that this most powerful aircraft engine yet developed and in production, has been selected to power five commercial air giants.

This powerplant is being used in the 108-passenger, four-engined Douglas C-74 Globemaster, the 114-passenger, four-engined Boeing Model 317 Stratocruiser, commercial version of the B-30 Superfortress, the 108-passenger commercial version of the Martin Mars airplane, the ultra high-speed, 108-passenger four-engined Martin Bombarcader, and the eight-engined Hughes Hercules seaplane, the world's largest aircraft, now being assembled at the West Coast.

**Military Use:**—At least six military planes, not yet publicly announced, are reportedly being developed around one or more of these engines in addition to other military craft already announced.

Since the Wasp Major is particularly useful in big, long-range airplanes, it is so power two of the Army's heaviest bombers, the six-engined Consolidated Valiant B-36 and the four-engined B-50. Two of the Navy's crash single-engined fighters, the Good-year F4U Corsair and the Boeing F4U, also use this engine.

**More Power:**—Engineers at Pratt & Whitney believe the presently announced power output of the Major, which has a piston displacement of 4,360 cubic inches, does not represent the ultimate possibilities of the engine.

They point out that the smaller, 18-cylinder, 2,900 cubic inch Double Wasp has delivered in combat operations well in excess of 2,600 hp. The Major's 25 cylinders are arranged in four rows of seven cylinders, each giving the engine a frontal area no greater than that of the 18-cylinder Double Wasp, a two-row radial engine with a basic rating of 2,100 hp.

**Small Diameter:**—The new engine is only one inch larger in

diameter than the original Wasp, which delivered 410 hp back in 1925. A helical arrangement of the new cylinders about the crankcase projects each individual cylinder into the air stream and gives the big engine better cooling characteristics than most two-row engines.

While production of the Wasp Major, which slackened temporarily with the general termination of war contracts, now is being stepped up to meet current demands, there has been no such interruption of the engine's development program.

**History:**—Development of the engine was accelerated and encouraged by experimental and production contracts from both Army and Navy. Less than five years have elapsed since the project was authorized late in 1939. The first engine was run in April, 1941. The Major first powered an airplane in flight in May, 1943 and completed its 150-hour qualification test in December, 1944.

Pratt & Whitney reported that

## Rescued from Air

Rescued from airplanes of large areas of fire-blackened national borders in the Northwest is underway by the U. S. Forest Service. One seed-trapping plane recently been a project covering 10,000 acres in Southwestern Idaho.

Other uses to which aviation facilities have been put by the Forest Service during the fire season, included fire-spotting from planes and transportation by air of fire-fighters to relatively inaccessible fire areas.

while the basic elements closely follow those used in approved models, the engine incorporates a number of innovations and improvements. These include:

Deep-fanned forged aluminum cylinder heads and distribution cylinder muffs of special design for use interchangeably with tracer or gasifier installations, scientifically correct cylinder cooling baffles, elimination of conventional gasket harness through the use of seven interchangeable, regulated, one for each bank of four cylinders, a vibration-free crankshaft and approved vibration dampers, an improved automatically controlled, hydraulically driven, variable-speed supercharger.



**Leads the World:** Most powerful aircraft engine in production is this Pratt & Whitney Wasp Major which is rated at 3,650 combat hp. It is only one inch larger in diameter than the original Wasp which put out 410 hp back in 1925.

## Navy Proving Base Trying Out All Fog Dispensing Systems

FIDO system's cost cut to \$300 per landing; smoke, water jet and hot air methods are scheduled for test at Arnsa, Calif., field; airline interested.

By SCHOLER BANGS

Coastline tests of every known fog dispensing system may be expected if the Navy continues the operation of its proving ground at Arnsa, Calif., one of the largest sites in the nation.

Present indications are that an improved FIDO system, utilizing runways with high-pressure fuel burners, holds greatest promise for fog dispersal at strategically located military air bases where imposition of radio silence might preclude use of conventional landing aids.

**Costs Cut**—Navy tests at Arnsa have resulted in the lowering of FIDO operating costs to as little as \$300 per landing, and the system is reported under investigation by one major airline.

A spokesman for this airline asserted that information given him during a visit to the proving ground indicated still greater savings in FIDO costs are possible with improved burners, and with use of instrument approach methods to reduce the degree to which the fog cover must be dispersed.

He pointed out that although the expense per landing might appear high it becomes less of an obstacle when one considers that "zero-zero" conditions at one key airport can disrupt an airline's entire schedule. When the same weather affects several lines a fairly expensive fog-dispersal can be employed with net economy, considering all other revenue fac-

tors, he said.

Under the supervision of Lt. Comdr. R. L. Champion, USNR, director of the Navy's Landing Aids Experiment Station at Arnsa, plans have been made to extend the testing of other fog dispensing methods, including:

• Smoke emission of fog droplets by focusing beams of sound, generated by stuns or other devices, above the upwind end of a runway.

• Pumping jets of water to a height of 100 ft. or more in the form of a water screen in the path of drifting fog.

• Creating a curtain of hot air in the path of drifting fog by blowing pre-heated air vertically from ducts laid the length of a runway.

• Projecting into the air deicers such as powdered soda, which will condense or precipitate fog droplets.

Although fog dispersal experiments have been reported over the past 30 years, no successful results were recorded until the British developed the FIDO system, and saved, by its use, large numbers of planes which otherwise would have crashed when fog blanketed runway fields.

• U. S. Use—Navy study of Britain's FIDO results began Sept. 30, 1943, and indications that Japan might launch an all-out northern invasion led to the installation of a FIDO system at Arnsa, where it was operated for the first time



**FIDO Burners** Indenture of high altitude cargo and transport problems are given by this view of a segment of the Navy's FIDO burners at Arnsa, Calif. In military use, where costs are of secondary consideration, FIDO has saved many planes which otherwise would have crashed.

Aug. 8, 1944. Subsequently the Landing Aids Section of the Navy Bureau of Aeronautics was organized and experiments began at Arnsa, where the Navy's FIDO burners were moved to Arnsa.

During an initial test at Arnsa that fall a PB4V-1 was able to use the field five minutes after FIDO burners had been ignited.

**Heavy Fog**—At the start of the test for covering the airport had a depth of 3,000 ft. and on the runway visibility and ceiling were "zero-zero."

Five minutes after the burners were started, the ceiling had lifted to 1,800 ft. near the center of the runway and visibility was good the length of the FIDO installation. In addition a hole was burned in the fog over the runway.

### Commercial FIDO Use

First commercial installation of a FIDO fog dispersal unit, now under way at Heath Row Airport, the new port of entry for London, is being watched with interest by American experts.

Britain, which recently ordered construction of overseas airfields, presumably is meeting the cost of the project under that program, encouraged by the fact that during the war 2,304 military planes were brought safely to ground when obscure British fog blanketed their bases.

## Military Aviation Procurement In Britain Is Twice That of U. S.

No extensive demobilization set up; 900,000 workers in industry which has orders on hand for more than 10,000 service aircraft as compared with 5,000 here.

By SCOTT BERSHLEY

The British aircraft industry, unlike our own, has undergone no extensive demobilization and has a military procurement program on double that of the United States.

The Society of British Aircraft Constructors reports there are 900,000 workers employed in the British aircraft industry "with manufacture of military planes still going on apace, orders for these totaling more than 10,000 aircraft."

**Far Above U. S.**—The significance of these figures is pointed up by the relative position of the British and American industries. Latest surveys show about 140,000 workers employed in the basic aircraft industry in the United States. Against the 19,000 orders for military aircraft in Britain, the United States has about 5,000 aircraft on order for the Army and Navy combined through June of 1944.

In this connection it is interesting to note that Britain produced only approximately one-third of the number of airplanes produced in the United States during the war. The ratio is about the same as the population ratio—close to one—but Britain apparently takes a different viewpoint of the importance of air power preparedness in setting up a peacetime program which calls for twice the number of airplanes in the current plans of the United States.

**AACC Report**—The recent report of the Air Coordinating Committee used a range of estimates in reaching its conclusions on procurement by the services. The report said that in determining the upper level—3,350 planes annually—of possible military requirements for aircraft "we have assumed the need for a substantial striking force ready at all times to compete in the maintenance of world peace."

The committee conceived of the lower level—3,000 planes annually—as a minimum which could be met only after attainment of world peace is well advanced and a substantial degree of demobilization has taken place.

The report adds significantly that "this lower level also approximates the absolute maximum we believe, from which it would be possible to plan for mobilization in a future emergency."

The committee expressed deep concern because prospective production over the next 12 months will be appreciably below this

### Instrument Backed

An aside-of-attack indicator to warn the private pilot of stalls and of excessive landing speed is an example of addition to the private plane's instrument panel. Victor E. Carbone, National Instrument Co. general manager, told the NAA Private Flyers Conference in Washington, last week. Carbone said that every private plane should be equipped with at least a primary group of instruments, to enable the pilot, as a measure of insurance, to make a 300-degree turn and go back where he came from.



### CARGO-GLIDER PICKUP:

As All American Aviation, Inc., topline mops up orders over the beach at Allerton, N.Y., it "mushes off" a glider loaded with live loads and consigned to New York markets. The test flight, made recently, was termed a complete success. The front cockpit of the two-place sport-type glider was packed with cases of lobster and the craft was towed to Bendix Field, Teaneck, N. J., where a New York dealer declared the cargo was in perfect condition. Retrieving such pickup rope.

safety margin.

Scheduled military production for the calendar year 1945 is less than 2,500 airplanes, not even 4 percent of the July 1943 production rate. This reduced level of procurement, the report added, "is eroding the base for any future expansion to a point from which it will be impossible to achieve the required volume of production."

**Policy Looking**—Leaders of the aircraft industry repeatedly have called for a clear-cut national air policy as necessary to assure the place of the United States as the world's leading air power.

Carl H. Squire, vice-president of Lockheed Aircraft, told the National Aviation Clinic in Oklahoma City, that he wanted to add his voice "to those who are advocating the immediate appointment by the President or Congress, of a committee of outstanding, competent, unprejudiced, public-spirited citizens, who would immediately undertake a comprehensive study of all phases of these problems and make recommendations for establishment of a definitive national air-power policy."

**Feasibility**—Robert E. Wilson, vice-chairman of United Aircraft Corp., and president of the Aircraft Industries Association, suggested to the Clinic that "a long-term Air Power Policy could attract private financing and relieve the government of some direct support. This would free industry from government domination and provide strong incen-

tries to competitive development in the revolutionary arts now opened up."

"This is one of the many reasons," he added, "why the aircraft industry is not a new government policy. The Presidential Advisory Committee on Air Policy."

**British Policy**—While United States aircraft manufacturers are asking for a definite policy, the British have set up a military procurement program and also a new aircraft industry, according to the Society of British Aircraft Manufacturers "is assured of an active future."

Already nearly 300 aircraft of various civil types are being ordered on orders placed by the Ministry of Aircraft Production alone. In addition, many producers have scheduled programs for the manufacture, without Government orders, of civil aircraft for both the domestic and export markets.

Details on even information on the British aviation program are not available, a situation which has prevailed for some time.

## U. S. Research Unit Urged By Eaker

It should be clear, says Lt. Gen. C. Eaker, AAF Deputy Commander, that "scientific research during the maintenance of our national security is vital."

Gen. Eaker, speaking at the annual dinner of the American Society of Mechanical Engineers in New York last week, pointed to the spectacular innovations in technological warfare which appeared with ever increasing momentum during the war and culminated with the atomic bomb and added:

"I believe it is in the national interest to establish a national research foundation composed of the most highly qualified scientists in the United States and charged with the responsibility of furthering basic research and development in all fields of science and the scientific training of adequate numbers of highly qualified men."

**Atomic Research**—The atomic bomb, he said, has made air power all important, because air power provides not only the best present means of striking an enemy with atomic bombs, but also the only reasonable protection against the misuse of atomic explosives.

## CAB Report Differs On Crash Analysis

Safety Bureau study, based on limited Japanese information, turning military pilots have been wrongly charged.

Although based on admittedly scanty evidence, the CAB Safety Bureau in effect has taken issue with other sources that contend returning military pilots are subject to a high accident rate in personnel and aircraft accidents, particularly with slower and lower-powered planes.

A Bureau report finds that of 468 "serious and fatal" accidents during the first six months of 1945, only 11 involved military pilots and none could be charged directly to the pilot's "loss of familiarity with the airplane's characteristics."

"Contrary" data previously available refuted the popular belief that military pilots are experiencing difficulty in reacclimating themselves to the light types of aircraft after having flown for some time in heavy, high-performance military aircraft," the Bureau states.

Both the Bureau's conclusions and figures contrast sharply with statistics of the AAF Office of Flight Safety on Italian plane accidents (Aviation News, Oct. 13) which indicated that better than 50 percent of the pilots involved during a one-year period had less than five hours' experience in the type of aircraft involved.

**Distinction**—The Safety Bureau separates accident statistics of military pilots from those of "other

military personnel," which it defines as those in the service who knew how to fly but do not do so as part of military duty. It emphasizes the belief that the opinion that service pilots need reacclimation is largely founded on the lack of such differentiation in the public mind. In July, August and September of last year, other military personnel were involved in 42 serious and fatal accidents, while strictly military pilots had only seven.

The Bureau also examined the major aircraft accidents in the first six months of 1945. Here were a total of 1,811 mishaps in this category, 30 involving military pilots. Only two of these could be attributed to a "loss of familiarity with the airplane's characteristics." In four other cases, the pilots' original experience in highplanes was scanty, ranging from 10 minutes to five hours.

"Qualified" commentators state that the weakness in the Bureau's survey is the fact that in the period it covers there were few military pilots returning to civilian life. The Bureau admits this, but contends that a later study, made after more pilots have returned to civilian life, "may reveal" loss of familiarity as a dominant cause of accidents. Meanwhile, it is recommended that the "correct emphasis" be placed on discouraging wilful recklessness flying, which applies, adds the Safety Bureau, "equally to all pilots flying civil aircraft."

## Move Seen to Support Mail Sorting at Airports

Hope that the air transport industry will support a Post Office Department move to obtain space for mail sorting at air terminals was expressed by department spokesmen at last week's annual meeting of Air Transport Association membership.

Last of new facilities now means that aircraft, after it is unloaded from a plane, must be taken to the post office for sorting then returned to the airport. On a country-wide basis, such a procedure means long total delay, being held by rail, on the other hand, is sorted on route.

The department, expecting that plane increase will mean the return to the airlines, such airports, such as the main business district, and so difficulty from shifting wind currents is anticipated.

## Larger Dealer Role in Disposal Of Surplus PT's Appears Justified

RFC figures for first month following change in procedure indicates new set-up has shown results which earlier critics had accused would be possible.

Justification of the repeated assertions by aircraft dealers that they deserved a larger role in the disposal of surplus training planes is seen in the sales figures for the first month following the change in disposal methods which permitted dealers a discount and lowered the floor price.

The reduced prices and the discounts were put into effect by the Reconstruction Finance Corp., aircraft disposal agency, Oct. 4. In the four weeks ending Nov. 1, total sales reached 1,133, a figure exceeded only once—last April when 1,200 planes were sold by PT's. This four-week figure includes transports and all other planes types. Planes sold at discounts to dealers totaled 1,321 during the period, a figure also exceeded only by the April results.

**Discounts**—Planes sold at discounts and at reduced floor prices (Aviation News, Oct. 12) are primary trainers, basic trainers and transports.

In the four weeks ending Nov. 1, 824 PT's were sold, 60 Comman, and 39 IT's. Most interesting figure is that for ST's. It is more than one-third of the total aircraft sold previously. The ST's sold from the beginning of the program up to Oct. 1.

Under the revised RFC sales procedure, reassessed several months ago, it is required that a dealer submit with the purchase of three or more aircraft at one time, on which he gets a 30 percent discount. Any planes he later sells at 31 percent discount, \$4,466,267, and parts costing \$20,315,282.

For the \$2,700,493 worth of aircraft and parts overseas sold, FLC has received \$177,623. Combining this figure with the far larger sales from RFC stacks in this country, FLC has received from overseas customers a total of \$2,474,817.

Although FLC has indicated its overseas aircraft surplus down to a considerable amount consisting primarily of cargo types, trainers and gliders, chances of disposal of even these would seem to be limited so the majority is in poor or fair condition.

Finally, the rush to take advantage of the new terms exhausted stocks at many sales centers. This is indicated by increasing sales at storage depots.

Disposal at depots exceeded that at sales centers in the week ending Oct. 18, and have been upward since.

## U. S. Surplus Aircraft Abroad Sell Slowly

Indifference of foreign nations to surplus U. S. aircraft abroad is reflected in the latest report of the Foreign Liquidation Commission, showing that of more than \$646,000 worth of surplus aircraft and parts overseas, only \$2,316,486 worth has been sold.

Bulk of the overseas stocks, of course, consisted of combat aircraft and parts which could not be used for civilian purposes.

The fact that the aircraft and parts other nations want are in this country is indicated in sales by FLC and its predecessor agencies from Reconstruction Finance Corp. stocks of \$4,866,884, up to Oct. 1.

**Unsold**—By far the greatest part of the overseas surplus—the unsalable combat types—has been unsold, aircraft with an original cost value of \$351,771,743 having been disposed of in that manner, and parts with an original value of \$195,493,336.

Remaining to be sold abroad as of Oct. 31 were aircraft valued at \$4,466,267, and parts costing \$20,315,282.

For the \$2,700,493 worth of aircraft and parts overseas sold, FLC has received \$177,623. Combining this figure with the far larger sales from RFC stacks in this country, FLC has received from overseas customers a total of \$2,474,817.

Although FLC has indicated its overseas aircraft surplus down to a considerable amount consisting primarily of cargo types, trainers and gliders, chances of disposal of even these would seem to be limited so the majority is in poor or fair condition.

## Surplus Total

Declarations of surplus aircraft will reach \$10,700,000,000 by next July, Surplus Property Administration, W. S. W. Symington, told the House Appropriations Committee last week.

SPA plans to add \$9,800,000,000 of the total as scrap, he said, and estimates that not more than \$100,000,000 in surplus aircraft, parts, and overhauls will be saleable in their original form.

**Schedule**—Symington said surplus aircraft disposal by next July at a total of \$2,300,000,000, and requested that \$414,000,000 of this surplus would be liquidated over in miscellaneous and other governmental subdivisions, with no cash payment.

That is the schedule of surplus aircraft declarations proposed by Symington: \$2,104,000,000 from July through September, 1945; \$1,000,000,000 from October to December; \$2,000,000,000 from January through March, 1946; \$2,000,000,000 from April through June. On the total anticipated surplus of \$10,700,000,000, SPA expects to get a return having sales of \$20,000,000 by next July, Symington said.

## AVIATION CALENDAR

- Nov. 10—NAT Midland Air Transport Corp., Norfolk, Virginia; Fairchild Corp. Wash., D.C.
- Nov. 11—John G. Johnson, Trade Association, New York City.
- Nov. 12—Aircraft Industries Association, New York City.
- Nov. 13—National Aircraft Association, New York City.
- Nov. 14—National Aircraft Association, New York City.
- Nov. 15—National Aircraft Association, New York City.
- Nov. 16—National Aircraft Association, New York City.
- Nov. 17—National Aircraft Association, New York City.
- Nov. 18—National Aircraft Association, New York City.
- Nov. 19—National Aircraft Association, New York City.
- Nov. 20—National Aircraft Association, New York City.
- Nov. 21—National Aircraft Association, New York City.
- Nov. 22—National Aircraft Association, New York City.
- Nov. 23—National Aircraft Association, New York City.
- Nov. 24—National Aircraft Association, New York City.
- Nov. 25—National Aircraft Association, New York City.
- Nov. 26—National Aircraft Association, New York City.
- Nov. 27—National Aircraft Association, New York City.
- Nov. 28—National Aircraft Association, New York City.
- Nov. 29—National Aircraft Association, New York City.
- Nov. 30—National Aircraft Association, New York City.

# Subcontractor To Manufacture Fairchild F-24's at Texas Plant

Robert McCulloch, former manager there for North American, heads new company which has orders for 200-300 planes; parent concern will handle sales

An initial contract for manufacture of 200 to 300 Fairchild F-24 high-wing four-place monoplane has been let to the Texas Engineering & Manufacturing Co., Ltd., Dallas, Tex., by the newly created Personnel Plane Division of the Fairchild Engine & Airplane Corp. It was reported that the parent company which will handle sale of the planes, already has booked over 200 orders for the F-24 and that the initial contract probably will be followed by a larger order.

**Tools Moved**—Jigs, tooling and fixtures for the F-24 which was manufactured pre-war at Fairchild's Elgin, Ill., plant are being transferred to the former North American Aviation, Inc. plant at Grand Prairie, Tex., near Dallas, which will be used by the Texas Engineering & Manufacturing Co., under a leasing arrangement with Reconstruction Finance Corp. Heading the Texas organization is Robert McCulloch, former Texas manager for North American.

J. Carlton Ward, Jr., Fairchild president, announced the new division of the company would handle design, manufacture, sales and service of private-owner aircraft, and its research and development program would be guided by Sherman M. Fairchild, chairman of the board.

**F-24 Price**—Price of \$5,500 has been set for the 145 hp. radial air-cooled Warner engine-powered F-24, while an alternate version, powered with a Ranger 80 175-hp. in-line air-cooled engine, will be sold for \$5,575. These prices include full standard equipment and instrumentation but not two-way radio.

Ward said Fairchild had discontinued its personal plane activities from the aircraft division at Hagerstown, Md., to permit that division to concentrate on military, naval and commercial planes. The division is currently producing a substantial order of C-52 Packed cargo planes for the AAF and is undertaking new military development work.

**Other War Work**—During the

war the company manufactured nearly 1,000 F-24s as a military cargo and personnel transport version known as the Forwarder, or UC-41.

At Dallas, McCulloch and his company had a small force already at work moving equipment into the one-third of the North American Plant A, which will be used for the personal plane production. His company also plans to do several reconnaissance jobs on Army C-47 transport planes, to convert them for commercial airline use and is negotiating for additional subcontracting with Fairchild for building sub-assemblies for the C-52 Packets. McCulloch and his partner, H. L. Howard, organized the new company about a month ago.

**Pre-war Use**—In pre-war days the F-24 was used widely by sportsmen pilots, charter service operators, small airlines, for light cargo, and by government services and corporations as an executive plane. The post-war version will be improved over the pre-war plane, reflecting some of the company's experience in producing the military version, Ward said.

As understood, the Texas organization is not financially connected with the Fairchild organization. The arrangement under which the F-24s will be built leaves the Fairchild company free to develop other personal aircraft, while at the same time keeping its name before the public through the Dallas-built F-24s. The company announced more than a year ago its plan for building a post-war four-place low-wing monoplane which have been temporarily shelved due to pressure of C-52 orders. It is presumed that this design will be developed further by the new Personal Plane Division.

**F-24 Data**—Performance of the F-24, equipped with the Ranger 175-hp. engine is quoted as: top speed, 133 mph; cruising speed (at 75 percent power) 118 mph; landing speed with flap, 53 mph; takeoff to clear 50 ft. obstacle, 1,390 ft.; landing over 50 ft. obstacle, 1,600 ft.; maximum range 138 miles; service ceiling, 14,000 feet.

Standard equipment will include bank-and-turn indicator, rate-of-climb indicator and sensitive altimeter in addition to all primary flight instruments. The plane will be completely wired and prepared for installation of two-way radio with engine shielded, antennas bonded and antennae mounted. It will be wired also for installation



Interior of F-24: Fairchild's F-24 personal plane, to be built in Texas by a subcontractor, is fully equipped for instrument flying and used for two-way radio equipment. The front right seat folds forward to allow access to the rear seat.

## of Landing Lights

While specifications and construction details of the Dallas-built F-24 are not given, it is presumed the plane is essentially the same as the F-24-W-6 pre-war plane, which had a 18-ft. 4-in. wingspan, 22-ft. 9-in. length, 8-ft. height, 14.65-in. wing loading, 14.62-in. weight empty, 2,350-lb. gross weight. Construction was fabric covered welded tubing, with spruce wingcaps and ribs. The tough war was armed with two struts. Landing gear was anti-cantilever split-axis type with full retracting tailwheel.

## Northwest Air Council To Meet Next Month

The Pacific Northwest aviation problems are scheduled for discussion Jan. 31-32 at Boise, Idaho, when the Northwest Aviation Planning Council holds its first post-war meeting. Representatives from Washington, Oregon, Idaho, Montana, Alaska and the Canadian provinces of British Columbia and Alberta will attend.

Extensively noted for attention are education of aviation personnel, federal participation in airport development, military and national guard aviation, state departments of aeronautics, airport engineering, outlook for women in aviation, aviation legislation and taxation. Harry L. York, national councillor of the organization, will be general chairman.

## ASME Hears Burden Ask Better Planes

The most important single step toward the solution of private flying problems in the U. S. is to get busy and "turn out better and easier to fly personal aircraft," William A. Burden, assistant secretary of Conference, told the annual meeting of the American Society of Mechanical Engineers last week in New York.

"The industry will be doing itself and the country a disservice," he said, "if it continues to turn out of new flying devices by offering them, in the name of post-war aviation, planes which give far less utility and comfort than the present state of the aircraft-designing art permits."

**Proposal**—He urged the industry manufacturers "to produce a minimum number of old-type planes to satisfy essential demand and keep your production intact, while saving full speed ahead to develop an improved airplane."

Burden urged full utilization of such technical advances as tricycle landing gear, spinproof characteristics, improvement in landing and takeoff performance through lower power loadings, two-control systems and reduction of external noise, either through redesign of propellers or use of some other type of power plant.

**Other Needs**—If designers get busy on these problems, he said, we can have 100,000 personal planes in the U. S. in ten years. If they fail, he warned, we won't realize this in a quarter of a century.

Other steps urged by Burden were, thousands of new small airports, better air marking, improvement of airport facilities.

## Baltimore Ruling

Baltimore Aviation Commission has approved application of three flight schools for use of facilities at Baltimore Municipal Airport, opening the restricted area to civilian training for the first time since it was restricted.

Their instructors and students must deal with the control tower before takeoffs and landings and must conform to traffic patterns, but training planes will not be required to have two-way radio until traffic becomes denser. Schools using the facilities are Stevens Flying school, headed by Howard L. Stevens; Grady Flying school, headed by Joseph Delan and Dr. M. Charles Ellen, and French Flying Service, headed by Howard French.

## Private Schools Allowed To Buy Surplus Planes

Revision of Surplus Property Administration regulations to make it possible for private aviation technical schools to obtain surplus aircraft and parts for instruction purposes was revealed today by Wayne Winham, secretary of the Aeronautical Training Society.

While air-supported institutions have been eligible to buy aviation surplus for non-flight use at extremely low prices, private schools heretofore could not. Costs to the private schools were not announced, but it was understood that the prices would be slightly below the scrap values of the equipment concerned. By contrast, in air-supported institutions are lower, ranging from about \$100 for a fighter to \$350 for a heavy bomber.



Due for Production in Texas: The Fairchild F-24, four-place personal and business plane, will be produced at Dallas, Tex., under a subcontract arrangement between Fairchild Engine & Airplane Corp., Personnel Plane Division, and Texas Engineering & Development Co. Above, an F-24 powered by a 175-hp. Ranger motor takes off.



## NEW PUBLICITY ANGLE:

H. G. (Racing) Nelson, Phoenix, Ariz., Encamp distributor, was widespread newspaper publicity for personal planes recently at the first Arizona Aviation Conference. Nelson, when he landed the parking lot with his Encamp and landed it up Broadway, parking it front of a "No Parking" sign. A motorcycle cop promptly arrested him, and Nelson paid a \$1 fine for several hundred dollars worth of publicity.





## YOUR ADDRESS IN THE SKY

• G-E Electronic Aviation Equipment will be important in your plane of tomorrow. It will put the skyways with new safeguards undreamed of a few short years ago. Whether the time or wherever you are it will enable you in flight to keep in constant touch with the ground—and ground in constant touch with you. It will be your invisible connection with airport and radio beacon—for flying instruc-



tions, weather reports, guidance along the airwaves. It will bring you radio broadcast entertainment to brighten dull moments of long trips.

• As in your car today, radio will be standard equipment in your future plane. It will be compact, light in weight, simple to operate. And it will be reasonable in cost. Leading personal plane manufacturers will use G-E 2-way radio in their new models.

• For your convenience and enjoyment, by your own plane tomorrow with G-E Electronic Aviation Equipment, Electronic Department, General Electric Company, Schenectady 5, N. Y.

The G-E avianogram fits in all U. S. Army and Navy aircraft

**GENERAL ELECTRIC**

## Aero Insurance Underwriters Cuts Premiums As Much As 50%

Group, one of nation's largest aviation policy handlers, makes reduction in expectation of great flying expansion and consequent increase in volume of premiums.

Reductions of as much as 50 percent in insurance premiums for personal aircraft owners and aircraft service operators have been put into effect by Aero Insurance Underwriters, one of the nation's largest aviation insurance groups.

While every opinion in the insurance field is that less experience does not justify any substantial premium reductions at the present time, Aero is making its decision on the strength of expected flying expansion, G. E. Lloyd, general manager, states.

• **Volume Increase**—In our judgment the number of aircraft in non-scheduled operations next year should be at least double the number this year," he says. "This justifies the assumption that the future will bring a substantial increase in volume of premiums. If so, a very important factor in lifting up the cost of liability insurance will be removed and rates can be radically modified."

As examples of the new rates, a \$1,000-\$10,000 public liability insurance policy now costs \$10 for the private owner and \$15 for an aircraft service operator, as against the old rates of \$20 and \$35. Property damage policy in the amount of \$10,000 now requires a premium of \$12.50 for the private owner and \$15.00 for the operator, compared with \$25 and \$40. The operator's premium on a \$5,000 passenger liability policy covering passengers carried for hire are cut from \$100 to \$75.

• **Low Coverage**—Along with the reduction, Aero has instituted a new form of coverage, "single limit liability," which can be bought in place of the usual minimum policy on public liability and property damage. A personal aircraft owner will pay \$17.50 for coverage in the amount of \$5,000 on both public liability and property damage. A limit of \$10,000 on both forms requires a premium of \$23.50. A \$25,000 limit has a premium of \$38.40. The single limit coverage is also available to include passenger liability.

In a letter to Aero agents and brokers, Lloyd frankly admits the

new rates and coverage are experimental. But while flying will increase, he continues, "we expect that losses will not be any greater proportionately than in the past."

• **Safety Manual**—In an endeavor to contribute to the safety record, Aero has published an "Airplane Operator's Maintenance Manual" to guide business executives in use of company-owned aircraft. Prepared by the underwriter's engineering department, the manual stresses, among other points, the danger of an operator's entering a flight when in the opinion of the pilot, the flight cannot be made with maximum safety.

### Atlanta Department Store To Handle Crowsper

First sale of personal aircraft in a Southern department store is being undertaken by Department Store Co. in Atlanta, Ga. The store is displaying Crowsper under an arrangement with Southeastern Air Service, Inc., Crowsper distributor for Georgia, North and South Carolina.

Southeastern is furnishing pilot-amen who explain the airplane to prospective customers and make arrangements for flight demonstrations.

### Cox, Berry Named Aides For Personal Flying

Col. Charles E. Cox, Jr., and William M. Berry, veteran CAA employees have been appointed as assistants to regional administrators for personal flying development.

Cox, former manager of the Indianapolis Municipal Airport is assigned to Region 3, including Illinois, Ohio, Indiana, Kentucky, Minnesota and North Dakota, with headquarters in Chicago. Berry, who formerly operated his own flying service, who supervised safety regulation in the Fourth Region, with headquarters at Ft. Worth, where he will continue to serve in his new post. The

region includes Texas, New Mexico, Arkansas, Oklahoma and Louisiana.

• **Veteran Flyer**—Cox, a combat pilot in World War I, returned to CAA recently after AAF service in the second World War. He was assigned as a private flying instructor before he re-entered military service. His other aviation experience includes airplane sales and flight instructor work.

### Oklahoma Sales System For Voyagers Set Up

Plans to develop a statewide Oklahoma lightplane distributor-dealer organization for the Stinson Voyager 130 were set up by Frick



### CAUSE AND EFFECT:

Use of insulating material and dual expense washers (above) has made it possible to reduce the noise level in the new Stinson Voyager 130 to a point where the plane uses a cabin down loud-speaker (below) in place of the headphones which have long been standard personal plane radio equipment. For dashboard who sit near loudspeaker, a jack is provided on the panel.



Clark, automobile dealer, who will operate the state distributor headquarters in combination with his automobile business in a new \$200,000 downtown sales and service building.

The airplane business will be directed by his son Jack, who served three years as a troop carrier command pilot before his recent honorable discharge, and his daughter Betty, now studying aviation law at Northwestern University.

The state dealer organization, it is being planned, will be set up as rapidly as production of the airplane justifies.

## Airpark Programs Boom in Missouri

15 communities follow Eldon's lead and 25 others are planning similar projects.

The example set by the Eldon, Mo., small community airpark project started about a year ago, has led to similar projects in 15 other Missouri communities of like size, while 25 others are making plans for campaigns to have their own airparks. Eugene Fryhoff,

aviation director of the state resources and development advised AVIATION NEWS last week.

The aggressive attitude taken by the Missouri towns toward airport development may be cited as specimens of the grass-roots airpark and landing facility potential which Arthur C. Rowman, chairman of the CAA non-scheduled flying committee, expects will lead with proper cultivation by local governments and individuals to as many as 16 to 20,000 landing facilities throughout the nation in the future.

**Bredford—Fryhoff and Mayor** Ben Bond of Eldon, disclosed that the model airpark already is being used by private flyers to a limited degree, although facilities there still are under construction. Plans are being laid for a flying dedication of the airport with wide representation from private flying interests, next June 1 and 2, under sponsorship of the Personal Aircraft Council of the Aeronautical Chamber of Commerce.

Edgar Smith, head of Airports Associates, Inc., Kansas City, will manage the Eldon Field. It is expected that this field in time will become a national model and dis-

play location for many types of hangars and other equipment which will be designed for airparks.

A model contract is being drawn up for management of the airpark which it is expected will be used generally by other Missouri towns interested in financing similar projects.

**Financing—Bond** since campaign carried on by Eldon successfully last spring to authorize a \$25,000 bond issue for financing the field, which is located within the city limits, has served as a model for a number of other communities. Fryhoff said. Posters, large newspaper display advertisements, campaign meetings, and house-to-house visits to get out the vote for the airpark bond issue were the main methods used.

Among examples of other Missouri towns cited by Fryhoff as following Eldon's lead are:

**Albany**, population 2,300, which has voted a \$25,000 bond issue for 120-acre airpark.

**Bellvue**, population 2,600, which also has voted a \$25,000 bond issue for an airpark.

**Boonville**, where 82 business men put up \$106 apiece to purchase a 100-acre airpark site.

**Slater**, population 2,500, which lost its airpark bond issue election by 59 votes, but citizens petitioned the city council to buy the airpark site anyway, with funds which were available, and the council responded to make the expenditure, so Slater has an airpark anyway.

**Warrensburg**, the only other town where an airpark bond issue has failed to carry, also has an airpark in spite of the defeat. Kenneth Mann, Warrensburg druggist, and chairman of the airpark bond issue campaign, bought the proposed airpark site as a private venture and is developing it for community use.

The airpark sites at Bellvue, Slater and Albany all are either partially or completely within the corporate limits, within easy walking distance of any part of town, and it is planned to include the portion of the airparks which are not now within the limits, by annexing municipal ordinances.

A privately developed one-way strip at a fishing resort at the Lake of the Ozarks, also is available as a result of the Missouri development program. The one-way strip is within a short walk of the cabins of Mel Atkins, who is operating the landing facilities as an added attraction for his patrons.



## 5,000 WERE ASKED . . .

As a guide to the private plane manufacturer in developing his new models, more than 5,000 pilot and pilot owner members were recently asked by the Aircraft Owners and Pilots Association to state, on the basis of their experience, their instrument requirements in the new places which they planned to purchase. The result of this extensive query, three fourths of whom are or have been plane owners, will be of interest to all who, themselves, plan to purchase planes. The results showed that these pilots were overwhelmingly in favor of "better" instruments than most private planes contained. And they were willing to "pay more" to get them. Reasons: "To make flying safer . . . to increase the utility of my ship . . . for efficiency and economy." Over 80%, for instance, want Sensitive Altimeters in their new planes. To meet the need so clearly outlined by these thousands of pilots, Kollsman has developed a new line of instruments designed and proved for the private plane owner. Full details of these instruments will shortly be announced. Kollsman is making available the pilots' answers to the written basic questions in the AOPA Survey. For your copy, write Advertising Dept., Kollsman Instrument Division, Square D Company, 30-08 45th Avenue, Flushing, N. Y.

## KOLLSMAN AIRCRAFT INSTRUMENTS



SQUARE D COMPANY

BRIDGEVIEW, NEW YORK

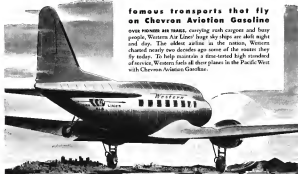
REDWOOD CITY, CALIFORNIA



## FLIGHT DEMONSTRATOR:

A flying laboratory to demonstrate the new lightweight line of personal plane radio equipment has been announced by Bendix Aviation Corp., radio division, Baltimore. Gordon R. McWhorter, experienced transport pilot, and formerly active in CAA and in civilian training schools for AAF cadets, will have charge of the plane, operating out of Chicago over the eastern half of the United States. Bendix engineers expect McWhorter' experience with the flight laboratory will contribute much practical knowledge toward tests and further development of personal plane equipment.

# Stars in the sky. . . Western Airlines



## famous transports that fly on Chevron Aviation Gasoline

over power its load, carrying such cargo and busy people, Western Air Lines' large ships are still right on top. The oldest airline in the nation, Western changed nearly two decades ago some of the routes they fly today. To help maintain a first-class high standard of service, Western fuels all their planes in the Pacific West with Chevron Aviation Gasoline.



OLD-TIME TRANSPORT, the first with four engines and steering, aerodynamically, was introduced by Western in 1916. It was the forerunner of large, 40-passenger, four-engine Western planes now being manufactured. The Western power engine of Chevron Aviation Gasoline operates these air giants economically and with ease.

WESTERN'S AIR TRAIL runs over the West, and Chevron Western transports fly in the Pacific West. Chevron Aviation Gasoline fuels these planes in available for power plants, too, along all the depots of the West.



1600 HHPower engine, power Western Airlines, are regularly checked and overhauled by special Western aircraft shops. Clean, clean, high-speed Chevron Aviation Gasoline makes engines too longer—more efficient.



TRANSPORT pilots give Chevron Aviation Gasoline the O.K. sign. Like spring engines, you'll find Chevron Aviation Gasoline brings on the best in aircraft engines. It will make your personal plane, too, a star in the sky.



## PRODUCTION

### Use of Nazi Helicopter Designs Believed Under Study in U. S.

Aston Flettner, noted German engineer, offers to build samples of latest models and make his knowledge available; one craft called most advanced in field.

Possibility and desirability of utilizing German helicopter designs and techniques are believed to be under study by U. S. industry and government, following an offer by Aston Flettner, Germany's foremost rotary-wing engineer, to build samples of his latest creation for U. S. authorities and make his knowledge available.

Flettner, while confined to a detention camp by occupation forces, revealed many details of his work to the Combined Intelligence Objectives Subcommittee, the report of which has just been released. New Design—Although the Flettner FL-332 (AVIATION NEWS Oct. 15) is regarded as being a most advanced type of helicopter, its inventor terms it outmoded by a new design, the FL-338, which incorporates his entire 14 years' experience with related wing craft.

Regarded as one of the world's leading aeronautical designers and noted for many aerial and control developments which are used on most aircraft, Flettner has been working on helicopters since 1927 and in some respects may have achieved better results than helicopter engineers in this country. The FL-332 was the fourth design of his company and 26 different models of it were built. By the end of the war, the German armed forces had placed an order for 1,200 of them.

Performance—Some Allied specialists who have seen a FL-332 have confirmed that it holds the peak of present development in its field. It was used by the Germans for convoy patrol in the Aegean Sea and in tests it flew in 50 mph winds. It can achieve an altitude of about 16,000 ft., and can carry two or three persons at a top speed of about 100 mph.

The two rotors of the craft were two-bladed, mounted on separate but adjacent hubs, and inclined away from each other while ro-

tating in opposite direction. As they are practically one assembly, Flettner says, it is unnecessary to have rotors on each side of the craft, or a counter-torque propeller in the tail.

The gearing is simple, the rotor shafts being connected to the motor by a worm gear drive.

Application—Flettner declares that the FL-332 design is especially applicable to the construction of helicopter cars and buses, and it is this enterprise that he would most like to cooperate in with U. S. manufacturers. When freed, he hopes to be able to develop his ideas along that line.

No details on Flettner's newest design, the FL-338, have been revealed. He proposed to occupation authorities that he be permitted to reopen his factory at Frankfurt-am-Main under the surveillance of

## Argentine Exports

Remission of the granting of export licenses for aviation equipment to Argentina is announced by the State Department. Licenses will be subject to the requirement that the equipment be used only for development of private and commercial aviation.

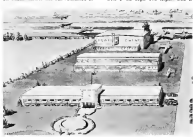
"This action results exclusively from the progressive relaxation of wartime restrictions," the Department declares, "and is totally unrelated to any political considerations."

Allied officials, and especially four model FL-332s, two each for the British and the Americans. Only in this way, he asserted, could he transmit all the information on helicopter design that he has at his disposal.

### AAF Orders for P-82 Believed on Way

Indications that North American Aviation soon will receive production orders for six Twin Mustang fighter-bomber, the P-82, were strong last week as the Air Technical Service Command completed trials of the plane.

The P-82 tops 475 mph, has a



## NORTHROP SCHOOL

Creation of Northrop Aircraft Institute, which will begin operations early next year, has been announced by Northrop Aircraft, Inc., at Hawthorne, Calif. Sketch shows buildings which will be occupied by the Institute at Northrop Field. The school will specialize in aeronautical engineering and airframe maintenance mechanics courses, starting home-study courses in January and resident school classes in March.

combat range of more than 2,900 miles and will operate up to 45,000 ft. **A73C** disclosed.

► **Heavily Armored**—It has a gross weight of 20,000 lb. and empty weight of 14,390 lb., mounts six free-dwelling 30 caliber machine guns in the center wing section, four each for 1,400-lb. bombs, and five rocket-launching racks carrying a total of 15 rockets. An eight-gun missile can be installed below the wing at the centerline.

Dual controls make the fighter a two-pilot plane, although the chief pilot is assigned to the left-hand fuselage. A total of 4,488 hp is supplied by the plane's two Packard-built 12-cylinder V-1650 Rolls Royce engines. Typically, the plane shows the advantages of two-engine performance, while maintaining the fatigue that would ordinarily be suffered by a single pilot on long missions.

► **U.S. N.A.A.** receives a production order for the P-53, it will be produced in the company's Ingwood plant on line previously producing the P-51H.

## Constellation Wing Given "Shake" Test

Lockheed exposed to atmosphere results soon at 4,000-hr. check on integral fuel tank leakage.

Lockheed Aircraft Corp. is expected to announce soon the results of a 4,000-hour shake test conducted with a Constellation wing section in seeking to solve

problems of integral fuel tank leakage.

Intention has been given that the company has succeeded in developing a satisfactory tank sealing compound, and that no major leakage should develop in production models of the Lockheed transport.

► **Major Problem**—Integral fuel tank leakage proved a major problem in the design of four-engine military bombers and transports, and during the closing year of the war all manufacturers of multi-engine planes were engaged in seeking solutions through the development of sealants and new tank structure designs.

To test the success of Constellation integral tank improvements, Lockheed developed a simple but highly successful shaking mechanism shown in the accompanying photograph.

► **Vibrators**—At the other end of the section mounted wing, was fastened a framework transmitting to the wing the vibration impulses of a weight-loaded eccentric fly-wheel, electrically driven. Smaller eccentric vibrators were mounted on the main spar at engine mount points, to provide a simulation of engine vibration.

So successful was the device in running the fuel tank tests that Lockheed engineers are contemplating its use in an extended study of the wing structure under simulated flight stresses. Test loads of up to 55 tons have been applied, and for the first time engineers have been able to study the "weak-

## C-W Acquisition

The Marquette Products Co., of Cleveland, has announced the acquisition of the Marquette Products Co., of Cleveland, manufacturer of precision parts and assemblies for the automotive and aviation industries since 1925, has been acquired by Curtiss-Wright Corp.

G. W. Vaughan, president of Curtiss-Wright, will assume the newly-created position of chairman of the board of Marquette. Herbert Gusts will continue as president and general manager of Marquette which currently employs 1,000 people at its Cleveland plants where operations will be continued. No change in personnel is contemplated under the new setup.

► **Marka Trend**—Marquette is the second firm Curtiss-Wright has acquired during the past year, marking a definite trend for the corporation in buying over cooperatively small manufacturing units where engineering and financial assistance can be used to advantage. Late in 1944, Curtiss-Wright purchased the L.G.S. Spring Clash Corp., of Indianapolis, manufacturer of spring clash assemblies for all types of mechanical equipment.

line" of both the interior wing structure and outer covering during the simulation of flight stresses resulting in displacements of up to 15 inches at the outer portion of the wing.

► **"It is the first time that aircraft designers and engineers have been able to observe first-hand the effects of flight upon a plane's internal structure,"** says Hall E. Hibbard, Lockheed vice-president and chief engineer.

## DeHavilland of Canada Taking Back Factories

De Havilland Aircraft of Canada, Ltd., is gradually resuming operation of the factories at Toronto for peacetime production. The Canadian government took over the facilities to speed production of the Mosquito combat craft, and is now turning them back to the company.

Some of the buildings already are being used, while the three war-time built assembly bays for the Mosquito are still operated by the government, currently for storage.

► **Plans Prepared**—While no new

**AIR ASSOCIATES**  
INCORPORATED

(1) THREE-RANGE PRESSURE REGULATION ADJUSTABLE TO DESIRED P.S.I.  
(2) LIGHTWEIGHT SMALL SPACE HAND PUMPS FOR 1000, 1500, 3000 P.S.I.  
(3) MALE AND FEMALE CHECK VALVES FOR 1000, 1500, 3000 P.S.I.

## Harnessing 3,000 psi Hydraulic Pressure

The extra advantages of 3,000 psi hydraulic pressure can now be utilized completely with three new items of Air Associates design and manufacture... a small, light, adjustable 3-range pressure regulator... check valves, plastic-on-steel poppet type or steel ball type... and a low-weight, high-capacity hand pump... All meet latest Army-Navy Specifications.

The compactness and light weight of these units recommend them to aircraft manufacturers. But their dependable and accurate functioning in heavy service and temperatures ranging from -65° F. to +165° F. ... suggest significant new potentials for hydraulics applications in all industries!

Air Associates is also prepared to make retreating cylinders suited to your individual 3,000 psi hydraulics requirements. Detailed specifications on all Air Associates equipment on request... Inquiries are invited.

## •Air Associates

INCORPORATED  
TETERBORO, N. J. Branches: ATLANTA, CHICAGO, DALLAS, LOS ANGELES, ENGLEWOOD, AND MANUFACTURERS OF AIRCRAFT SPECIALIZED SUPPLY OF ALL TYPES OF MATERIALS TO THE INDUSTRY SINCE 1917



"Constellation" Wing "Shake" Test. Cleveland secretly on a massive steel tritro, the wing of the Lockheed Constellation is "shaken" at a speed in excess of 350 miles an hour. This wing has flown for 4,000 hours to test structural strength and the efficiency of integral tank sealing methods.



New 1,000 psi hand pump meets Army-Navy specifications as follows: 1,000 psi hydraulic pressure, 1000-1500-3000 psi, 1000-1500-3000 psi, 1000-1500-3000 psi, 1000-1500-3000 psi.



New check valves for 1,000, 1,500 and 3,000 psi hydraulic pressure meet Army-Navy specifications as follows: 1,000-1500-3000 psi, 1000-1500-3000 psi, 1000-1500-3000 psi.

type aircraft are yet announced by the company. It was learned plans for new aircraft are being drawn. Meanwhile, de Havilland has several hundred employees on the job manufacturing the pre-war designed Fox Moth, a four-place cabin type biplane, powered with a single Gypsy Major engine. Test flights of the first peace-time model are expected soon.

## Airspeed Ambassador Being Pressed

Now under development at the Airspeed factories in Britain is the Airspeed Ambassador Transcontinental liner of 40,000 lbs loaded weight, high-wing arrangement, triple undercarriage, nose wheel steering, low landing position and level attitude when at rest.

The craft embodies a slim laminar-flow wing. It is powered by two Bristol Centaurus 2500 hp, three-valve engines. The company reports it will take off and clear a 50-ft obstruction in 100 yds and climb continuously thereafter at 1,500 fpm, when loaded to gross weight and carrying a payload of 9,400 lbs. It is designed to cruise at 240 mph, at 20,000 ft. Range is around 1,000 miles.

► **Pressurized**—The cabin is pressurized and air conditioned. The plane is expected to fly next year.

## New Rubber Bookie

A booklet outlining applications for rubber and synthetic products in industry has been published by H. F. Goodrich Co., and is being supplied on request. Opening pages are devoted to explaining Kevlar, a flexible synthetic material.



**New British Transport:** Artists drawing of the Airspeed Ambassador which is expected to fly next year. It has a gross weight of 40,000 lbs and a cruising range of 1,000 miles.

## Minneapolis-Honeywell Expands

Minneapolis-Honeywell Regulator Co., manufacturers of automatic controls, including recently announced electronic automatic pilots and other aeronautical devices, has begun an expansion program which will cost \$3,000,000 and enlarge plants and equipment in three U. S. cities, and in Toronto, Canada.

The company's main plant in Minneapolis was expanded during the war, but will be enlarged still further with the construction of a new wing to add 120,000 square

feet. Facilities in Chicago and Philadelphia will also be increased.

► **Employment** — Harold W. Swett, company president, declares that reconversion is practically completed and that employment is approximately 30 percent above previous peacetime levels.

The number of employees is expected to go even higher when the factory expansion is accomplished according to present plans made by the company.

## Canada Studying Tailless Aircraft

A general investigation of tailless aircraft is being conducted by the National Research Council at Ottawa, J. H. Parks, director of the mechanical engineering division told Aviation News. This investigation includes wind tunnel studies, work in the spinning tunnel and flight tests of a flying model, to study the stability and control of this type of aircraft.

A glider model has been chosen for the flying model in order to avoid interference with various instruments and to avoid the additional complications of an experimental engine installation combined with a shaft drive. The wing span of the glider is 47 feet and the maximum weight in test will be approximately 4,000 pounds. A pilot and observer will be carried and dual controls are provided. The wing section is of the low drag, or laminar flow, type. The primary structure of the glider is entirely

wood, embodying a relatively thick molded plywood skin over conventional ribs and a single laminated spar.

► **Instruments** — Fairly extensive automatic recording instruments is being fitted for the flight tests.

## Use of Rocket Sticks For Takeoffs Discussed

Possibility of utilizing a rocket-propelled sled for the launching of jet aircraft is being discussed in aeronautical design circles. The device would replace conventional landing gear. Jet engines would be designed to make feasible "belly" landings without damage.

The plane would have small, lightweight retractable gear to facilitate ground handling.

► **Sevings** — In takeoffs, the jet sleds would be hurled into the air leaving the sled on the ground. Claimed advantages of the proposal is a great weight-saving in eliminating conventional landing gear, observed takeoff distance and, through the use of the smaller taxing gear, more space for payload.

## Board Completed

Formation of the board of directors of War Assets Corp., a Reconstruction Finance Corp. subsidiary which will take over RFC's surplus disposal functions (Aviation News, Oct. 28), has been completed and Arthur J. Fushman has been named War president.

Other members of the board, in addition to Fushman and Sam H. Bushland, chairman, are: George F. Buskie vice chairman, Harvey J. Gunderson, Merritt C. Pettibon and David H. O'Brien.



ARMED AMBASSADOR SEAT ON THE GENERAL CORPUSCULE TEST TEST BY GENERAL CORPUSCULE SEATING

**"THE FAMOUS M'ARTHUR SEATS" YOU READ ABOUT WERE DESIGNED AND BUILT BY WARREN M'ARTHUR, NOT ONLY FOR GENERAL M'ARTHUR... THEY WERE "MUST" EQUIPMENT IN MOST ALL COMBAT AND TRANSPORT PLANES USED IN THE WAR**

**WARREN M'ARTHUR CORPORATION**  
ONE PARK AVENUE NEW YORK CITY  
- TRANSPORTATION SEATING -

## PERSONNEL

### Col. Rose Named Aide To TACA Board Chairman

Col. Leonard M. Rose (photo) has been appointed assistant to Benjamin F. Pepper, chairman of the board of TACA Airways. Until his recent release from the Army, Col. Rose was chief of transportation, base section, in Latin America. Before the war he had 14 years' experience in various fields of transportation in Latin America and spent 18 of those years in Mexico.

C. E. Lawton has been promoted to the post of assistant treasurer of TACA Airways Agency, Inc. Lawton joined the agency in 1941 as assistant manager. The agency represents TACA airlines of Central and South America.

Albert H. Charlton (photo) has been named sales manager of the aluminum divisions of the Reynolds Metals Co., with headquarters in Louisville, Kentucky. Charlton joined Reynolds in 1936 and was assigned to the company's sheet mill, later he became an assistant sheet manager. He helped set up the plants for prefabrication of aluminum parts for aircraft.

Carl J. Scader, formerly an aircraft maintenance supervisor for the AAF, Air Technical Service Command, has been named assistant to the chief engineer in charge of development of aircraft hydraulic testing machines and maintenance equipment by Gross Hydraulics, Inc., Brooklyn.

Chas. Johnson, former member of the public relations staff of North American Aviation, Inc., has been appointed to the publicity department of Douglas Aircraft Co., Inc., Santa Monica, succeeding Irving Krasner, who has been engaged as director of publicity for the Los Angeles Chamber of Commerce.

Stanley Schindler has been named director of advertising for the international division of Transcontinental

and Western Air, Inc., and Walter Brown, Jr., has been named director of passenger sales. Schindler was with the Air Transport Command and prior to joining the service, was account executive on TWA advertising. Brown has spent 33 years in the railroad and steamship business.

### Ringer Is Elected ACT Vice President

Capt. John Ringer (photo), Chief Pilot for Air Crops Transport Corp., has been elected vice-president of

flight, it has been announced by H. Roy Penick, president. Capt. Ringer also will continue as chief pilot of the line, now operating a non-scheduled service out of Newark Airport with a fleet of seven DC-3's. Capt. Ringer joined ACT in August, coming from Colonial Airlines.

Constance Peterson has resigned as chapter service director of National Aeronautic Association, to join her husband who has been in the service. She is being replaced by Mrs. Lucile Thompson, formerly with the U. S. Public Health Service.

C. E. Reid has been appointed manager of the Los Angeles branch of Air Associates, Inc., after having been temporarily assigned to the Los Angeles office for six months. Reid formerly was with Sikorsky Aircraft, Nicholas Benveniste, Inc., and Air Associates' main plant in Peterboro.

Col. Frederick G. Betts (photo), former chief of staff of the 9th Fighter Command, has been released by the Army to become executive consultant to the senior vice-president of Transcontinental and Western Air, Inc. Col. Betts has been with TWA and its predecessor companies since 1926.

Prior to joining the Army he served in the organization of the service's international division under contract to the Air Transport Command.

### Bonnie Heads United's Mexican Subsidiary

Allen F. Bonnie (photo) has been named president and general manager of

United Mexican Airlines, S. A., Mexican subsidiary of United Air Lines. He succeeds William A. Taylor, resigned. Bonnie, who has just returned to United after service as a commander in the Navy's Bureau of Aeronautics at Washington, before going into service he was assistant to United's vice-president-operations. He began his flying career in 1917.

W. G. Wood, eastern traffic manager of Trans-Canada Airlines prior to his enlistment in the Canadian Army in 1942, has been appointed assistant traffic manager for TCA, and will specialize in development work as it affects the traffic department.

Harold F. Blackburn has been appointed director of the Atlantic region for the international division of Transcontinental and Western Air, Inc., while W. G. Gelein will be appointed supervising of flight operations. Blackburn is a millwright and has been directing the international division of TWA since last year.

Gelein, who has been with TWA for 33 years, also is a veteran pilot. He has been assistant manager (flight) assigned to the international division.

Ellen Gibson (photo) has been named publicity assistant in Donald Airways, Inc., publicity department. Her appointment is part of a long-range plan for enlargement of Donald's public information department.

Formerly with the southern region of the Army to become executive consultant to the senior vice-president of Transcontinental and Western Air, Inc. Col. Betts has been with TWA and its predecessor companies since 1926. Prior to joining the Army he served in the organization of the service's international division under contract to the Air Transport Command.

W. L. Wilkinson has been made new sales manager for Sales Aircraft Co. Don Young and William H. Quade, Jr., have been named his assistants. Wilkinson had been purchasing agent for Fokker Aircraft Co., and after a period of private business joined Sales in successful purchasing agent in 1945. Young was affiliated with the Wright Brothers in 1918.

## NORTHROP AIRCRAFT, INC.

### Announces a New Division The NORTHROP AERONAUTICAL INSTITUTE

dedicated to the training and advancement  
of men for careers in aviation



The entire aviation industry recognizes the critical shortage of aeronautical engineers, airline maintenance specialists, and expert master mechanics. Like other employers of aviation personnel, Northrop has found far too many of the present applicants for positions lacking in *aviation knowledge*. To handle a responsible job for civilian air lines, air bases, maintenance depots, or manufacturers, today's employee must have up-to-the-minute, comprehensive training in the handling of all types of civilian aircraft.

To meet this need, NORTHROP AERONAUTICAL INSTITUTE has been founded.



In this completely new school in the midst of the Northrop plant, students will learn the aviation craftsmanship of today—and tomorrow. They will be located on the Northrop mile-long air field, surrounded by intensely interesting research and development work—jet propulsion, gas-turbine aircraft engines, radar, and advanced airplane design.



Through the new courses offered by Northrop Aeronautical Institute, students can obtain specialized education for important positions in postwar aviation. Every detail of every course is fitted to the new aviation requirements. Yet the Northrop training programs are already proved by the education of thousands of employees and Air Forces personnel.



Each Northrop student gets the benefit of completely modern technical information and educational methods, as well as extensive equipment for practical shop experience. Even the specially designed school buildings are new.

We believe that the Northrop Aeronautical Institute will provide aviation training that is unparalleled in its value both to students and to the aviation industry. It is our sincerest wish that in 1946 and following years, the name "Northrop Graduate" will be a synonym for a *reliable and valued expert* in the field of aviation.

Inquiries invited for classes now forming.

### Northrop Aeronautical Institute

(A Division of Northrop Aircraft, Inc.)  
1005 E. BROADWAY, HAWTHORNE  
LOS ANGELES COUNTY, CALIFORNIA

NORTHROP AERONAUTICAL INSTITUTE  
1005 E. BROADWAY  
HAWTHORNE, CALIFORNIA

Please send me information on the training courses checked.

Name \_\_\_\_\_ Age \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

Check one: Please ☐ in Section ☐ Column ☐ on 1

- ☐ Aeronautical Engineers
- ☐ Airframe Maintenance Specialists
- ☐ Airplane Mechanics
- ☐ Engine Mechanics
- ☐ Radio Aids and Signal Mechanics
- ☐ Radio Aids and Signal Mechanics
- ☐ Radio Aids and Signal Mechanics

and since then has been with Curtiss-Wright, Sewerly, Republic and Brewster. Grade was a contract administrator for Lockheed before joining Solar.

**William Wiseman** has been named assistant chief engineer in the aircraft division of Continental Motors Corp. Wiseman has been associated with the Warner Aircraft Co. for the past 12 years and was chief engineer.

**William Moser Miller** (photo) has been named director of advertising and publicity of Air Cargo Transport Corp.



Miller goes to his new position from the War Aircraft Advertising Council with which he was associated since his return as a war correspondent. Prior to the war Miller was in charge of magazine and feature publicity for the National Broadcasting Co. Miller will develop an advertising and publicity plan in keeping with the company's national service to shippers by cargo carrying planes.

**A. D. Palmer, Jr.** has resigned the position of director of public and internal relations for Curtiss-Wright Corp.'s airplane division which he has held for 15 years, to join the Burke Dowling Adams Advertising Agency of Montclair, N. J., as an account executive.

**John Seare, Jr.** has been appointed director of public relations for Bell Aircraft Corp., succeeding **Stephen E. Fitzgerald**, who has resigned to accept another public relations position in New York. Seare is a Washington newspaperman who was director of information for the Defense Service Station and joined Bell in 1944. He has been assistant director of public relations for Bell.

**J. P. Shaw** (photo), former chief of flight at Consolidated Vultee Aircraft Corp.'s Tucson, Arizona, division,



has been appointed assistant supervisor for Convair's Stinson division sales department at Wythe, N.H. Shaw was an attorney and will serve as a liaison between sales and production departments and will serve as a liaison between distributors and dealers of the Stinson Voyager personal airplane.

**George E. Woodman** (photo) has been appointed assistant to Robert E. Cummings,



manager of Pan American Airways' Atlantic division. Woodman was previously assistant to John C. Cooney, who recently returned as Pan Am vice-president and assistant to **John T. Trappe**. Woodman joined Pan Am in 1936 serving in several capacities.

**Frank W. Jones**, former lieutenant commander in the Navy with Air Group 20, heads the recently-formed light metal products division of Northrop Aircraft, Inc.

**Carl Narstrom**, managing editor of *American magazine* before the war, has recently joined Fortson magazine as a staff writer on aviation subjects. Narstrom was one of the first members of a small staff who came to England early in the war to set up the organization that subsequently became the *RAA Air Force*. He later became assistant chief of

staff intelligence to Maj. Gen. Curtis LeMay at the newly formed Third Air Force.

**Col. William C. Ray**, former American Airlines maintenance field supervisor at Longbeach Field, has been discharged from the Army and has returned to the company as director of maintenance and overhaul of American Overseas Airlines. **Richard A. Hansen**, for the past year Baltimore traffic manager for American Airlines, has been assigned to the position of personnel administration manager-traffic.

**F. J. Bacon**, original project captain on the Northrop Black Widow, has been appointed Dayton representative for Northrop Aircraft, Inc., and will be responsible for liaison between Northrop Field and the ATSC at Wright Field.

The associated firms of Houser and Shifren and Smith, Haudman and Grylls, Inc., announce the establishment of an airport division under the direction of **A. R. Bapay**, formerly director, airport plans and survey service, Civil Aeronautics Administration. The two firms are engineering ones.

**William C. Spindel, Jr.**, newspaperman and columnist, has been appointed to the publicity department of North-west Airlines to serve as western region representative with headquarters in Seattle. He has been on the staff of the Seattle Times since 1934. This year was the annual award of the Washington State Press club.



This year was the annual award of the Washington State Press club.

## TELLING THE WORLD

The Burton-Shipley trophy presented each year by the Southwestern Association of Industrial Editors, has been awarded to **George E. Bonaldi**, public relations director of Chicago and Southern Air Lines. The moving award is presented each year to the editor doing the best job of interpreting management to the reader. Bonaldi, in addition, was also named director of the Southwestern Association of industrial editors for the State of Tennessee.

**TACA Airways Agency, Inc.**, representing seven affiliated and associated airlines in Central and South America, announces appointment of **Royal & de Guzman**, as advertising counsel. Newspapers, magazines, trade papers and other media will be used. Paul de Guzman is account executive.

**R. B. Stevenson**, former representative of Pan American-Grace Airways in Miami, has been transferred to the New York office to assist general traffic manager Christopher de Groot in handling Pan-Am's N. Y. advertising publicity.

**Jack Prescott**, city editor of the Reading, Pa., Eagle and with the Associated Press in Newark and Philadelphia, has been named assistant of Lockheed Aircraft Corp.'s plant newspaper, Lockheed Star.

The semi-annual roster of the Aviation Writers Association, containing 116 changes in the data on members, is ready for distribution to approximately 1,200 industrial concerns, newspapers, periodicals, and aviation associates. It contains the names of 225 regular, honorary and associate members. This is the fourteenth edition. Copies may be obtained from the executive secretary, P. O. Box 254, Grand Central Annex, New York.

The Institute of the Aeronautical Sciences has announced release for distribution of the *Aeronautical Engineering Catalog*, 1945 edition. It is published as a reference guide for aeronautical designers and engineers and contains specifications and engineering data on a wide variety of aircraft projects available for post-war airplanes.

AS WESTERN AS

THE Joshua

Springing from the warm, kaleidoscopic desert of the great Southwest, the giant Joshua tree rises massive and to dwarf its neighbors. This distinctive, unshaped form of the desert floor commands the eyes of all travelers and the focus of their interest.

To the sunshine and color of America's foremost desert playground, Western Air Lines carries vacationers fleeing western wrath. For Western is the airline to America's worlded-out of parks and recreational areas in winter and summer. As the West's own airline, Western has filled the pioneer's role in building up really needed air service for the people of the West. Today, 37 key industrial and agricultural communities in 7 areas and Western Canada are served. With delivery of larger, faster planes only a few weeks away, Western needs only the approval of new applications to augment service to many more communities, bring improved air transportation to many others.

**WESTERN AIR LINES**  
AMERICA'S PIONEER AIRLINE

General traffic office: 310 W. 4th Street, Los Angeles 14

# CONTROLLED ATOMS or CONTROLLED LIVES

SINCE August 4th when the first atomic bomb was released over Hiroshima, the American people have been subjected to a continuous barrage of pronouncements on the use and control of atomic energy. Some of this comment has been strident, and much of it conflicting. A considerable portion of it has been of sincere and constructive confidence.

It has not been easy to separate the wise counsel from the merely noisy, and it is small wonder that the minds of many are troubled and confused.

However, the sheer mass of discussion poured into press and microphone has awakened us all to the gravity of the issue. In terms of any problem on which Americans ever have been called to exercise a judgment—this is it!

Even the dullest now recognizes that atomic weapons hang over modern civilization like the Sword of Damocles, and understands in some measure how fragile and taut is the hair of political balance that holds it suspended.

From this point on, we need the coolest and most carefully considered judgment that can be brought to bear. Discussion highly charged with emotionality will but increase the tensions both at home and abroad, and render wholly infeasible a delicately sensitive problem.

## What Is The Problem?

The major outlines of that problem now are coming into focus; it is understandable. First: A. The invention has opened up a new and virtually unlimited source of energy, and the engineers have discovered how to turn it into a military explosive incomparably more powerful than any we have known. We know that this energy may also be used to produce heat for useful power, and we suspect that the radioactive substances produced by the process in arbitrary unimagined quantity may also have medical, industrial, and other constructive applications.

B. Terrifying as have been the demonstrations of the atomic bomb thus far, we know that they are as nothing in comparison with its potential destructiveness. The explosive force of individual bombs can be increased tremendously, and means for their effective delivery to predetermined targets in wholesale quantity already are at hand. The experts tell us that no predictable means of interception can be devised, and that reprisal in kind probably will be the only answer to an enemy attack with atomic weapons.

C. So far as we can see now, even successful retaliation would be at best an answer of hollow effect. Only two nations which having wholesale stock-piles of bombs could reciprocate the practical destruction of each other.

Since a first breakthrough like night will constitute an enormous advantage, a blow dictated by a reflexive urge to equip or revenge might have the best chance of survival. But since the widest possible dispersal of bombs and branching units would be dictated by the strategy of atomic weapons, it is doubtful that any nation could destroy another without itself suffering destruction. On both sides the major centers of population could be wiped out, and the nation of least concentrated industrialization and commerce would suffer least. However, no one can be sure that the concentrated explosion of as many as 25 thousand atomic bombs would not poison the atmosphere of the world to an extent that would be fatal to great masses of population, not only within the country bombarded, but perhaps in the country which launched them.

D. The problem is further complicated because, as far as we know now, any large-scale commercial use of atomic energy as a power source is more or less inextricably linked to a potential military use. It is true that if atomic power becomes economically feasible (which is by no means certain for a long time to come), it would require only low-grade concentrates of fissionable material, which would need further elaborate and costly processing before reaching explosive potential. But the process of producing such low-grade concentrates constitutes perhaps two-thirds of the industrial effort required to make effective bombs. It follows, then, that if nations were to equip themselves to produce large quantities of low-grade concentrates for power generation, the effort required to develop large-scale bomb production would be materially reduced. Moreover, the maintenance of an effective inspection to police agreements not to produce bombs might be fabulously difficult if atomic power generation were allowed.

E. In addition to the major problems posed by the use of atomic bombs in international war, any nation which produces or possesses such bombs, or the fissionable materials with which they are loaded, faces still another in the danger of their falling under the control of persons or elements in its own population.

## What Are We Going To Do About It?

We face the hard fact that we have produced a weapon capable of destroying whole nations—perhaps even the whole world. Although we were repeatedly asked in its development by the nationals of other countries, we, together with Great Britain and Canada, now must take the initiative in deciding what shall be done with it. We have only two choices. We can try to keep this weapon as a monopoly of our own, or we can try to place it under broad international control.

## Can We Keep It To Ourselves?

If we know one certain fact about the atomic bomb, it is that it cannot long be held as a monopoly of those nations which produced it.

If Nazi Germany had succeeded in developing the weapon first, it probably would have attempted to achieve world domination, with other destruction as an alternative. Such a course is not within our range of choice. It violates every principle for which we stand.

Much confusion has been stirred concerning the ambiguity of other nations to enter the scientific, engineering, and industrial problems involved. It is the virtually unanimous opinion of those who worked on the project that several nations today are fully engaged in science, engineering, and industrial organization to produce atomic bombs and to provide the means for launching them. At least one of these nations, Russia, has also access to an ample supply of the necessary raw materials. The only debate is over whether it would take three, or five, or ten years for her to marshal her resources to produce bombs in multiple thousands. Once such an atomic race were on, we have no reason to believe that Russia might not direct most resources to the task that we ourselves would be so eager to drop into it.

Additional confusion is talked as to how we might attempt to cope with the problem of living in a world in which mutually suspicious or hostile nations face each other, with stores of atomic weapons on both sides. We hear talk of dispersing our bases and even of moving underground. No one has seriously reckoned the difficulty or the cost of following such counsel of despair. Still less has anyone appraised the neurotic effect upon our mass of living by any such propitious formula, under continuously mounting tension they offer, and year after year.

Certainly, if we could find no way to prevent the competitive production of atomic weapons, we should be driven at least to the selective dispersion of our bomb-launching facilities, of course key industrial establishments, and of our centers of government and governing personnel. We should be forced, also, to change our traditional requirement that only Congress can commit us to active war. We should be forced to organize ourselves as a police or military state, with our scientists regimented and monitored, with all of us under constant surveillance against the smuggling and plantings of time bombs, and constantly alerted against attack through the air.

Before we commit ourselves to any such intolerable procedure, we should be mad not to explore all possible means for making it unnecessary.

## The Only Feasible Alternative Is Effective International Control

This cardinal principle has been recognized in the statement of November 19th, issued jointly by President Truman and Prime Minister Acheson and King. The statement frankly concedes that against atomic weapons there can be no adequate military defense, that no nation can command a monopoly of such weapons, that responsibility for eliminating atomic energy as an instrument of war and for devising safeguards over its use for the

advancement of science and other peaceful and humanitarian ends rests upon the civilized nations of the world.

They propose that a commission be set up at once under the United Nations Organization to make recommendations: (a) for extending between all nations the exchange of basic scientific information for peaceful ends, (b) for control of atomic energy to the extent necessary to ensure its use only for peaceful purposes, (c) for the elimination from national armaments of atomic weapons and of all other major weapons adaptable to mass destruction, and (d) for effective safeguards by way of inspection and other means to prevent conspiracy among nations against the hazards of vaults and evasions.

Already criticism is leveled at the wording of the statement, at alleged omissions, at the wisdom of choosing the United Nations Organization as the medium through which to seek agreement in view of the weaknesses of the UNO Charter.

None of these issues should be casually apparent. What matters is that an avowal has been made in good faith for the nations of the world to meet and decide upon means for ensuring the elimination of weapons, the existence of which no one can afford to tolerate.

The decision cannot be other than international, it will require the best thought of the best brains the world can muster. The smaller nations have an equal stake with the large, and from them we will come the most fruitful suggestions. But Russia now holds the key to the success or failure of our proposal. If she accepts our invitation, no other nation will refuse.

Alternatively, there will be an international agreement now passed by atomic weapons. It will mean an end of free science, a severe policing and registration of international travel and trade, and unmanageable restrictions upon those individual freedoms which we have just fought so desperately to preserve. This is the dismal prospect if we fail to arrive at a genuinely international accord on the control of atomic energy. But even this interval would permit to last only for a sunny period, until constant staring gazing the push-button on the push-button of extinction.

The only reasonable solution lies in finding means to eliminate war itself. That we cannot hope to achieve overnight, but we can, and do hope that the nations will now agree to eliminate atomic weapons and their radioactive by-products as instruments of war.

If they do that, we can move forward more surely to the constructive development of the unspeakably valuable resources that science has merely opened to our use. And, we can hope also for a progressive improvement in international understanding.

Unless the nations can reach agreement on this paramount issue of atomic energy, it is difficult to conceive of any vital issue on which they might agree.

*James H. McGraw, Jr.*

President, McGraw-Hill Publishing Co., Inc.





**power in motion**

Transforms the forces of War  
into the implements of Peace

**menasco**

Manufacturing Company

Power-Hydraulics

## SPECIAL AIR SERVICES

CHARTER NON-SCHEDULED INTRASTATE

### CAB Restriction Order Indicated As Non-Scheduled Hearing Closes

Board expected to follow exonerates' recommendations on limitations; operators present their case in unprecedented strength and harmony.

The nation's aircraft service operators in unprecedented strength and harmony have presented their case to the Civil Aeronautics Board for continuation of the present exemption of non-scheduled air services from economic provisions of the Civil Aeronautics Act. As there is a strong indication that the board will follow major recommendations of the exonerates to draw up a more restrictive exemption order which will set up new definitions, set a monetary limit on certain trip frequencies, and require operators to register, file periodic reports and to maintain minimum standards of insurance.

The board seeks a skeleton outline of economic regulations which can be filled out as the non-scheduled industry itself takes form. Any provisions considered basic but found to be restricting the business of an operator usually could be made the basis of an exemption for that operator of indefinite duration if he was deemed not in competition with scheduled carriers.

**ATA Approval**—It is significant that the Air Transport Association, whose members most fear future competition of charter or non-scheduled operators, approved virtually all of the exonerates' suggestions.

There appears a strong possibility that the exonerates' recommendations for classifying operators by frequency of service will be followed. Fixed base carriers would be limited to trips to or from their bases, except for occasional flights between other points, and would not be permitted unlimited trips between any two points served by scheduled air carriers.

**No Answers**—CAB Chairman Pogue and members Branch and Lee reiterated in their questioning

of non-scheduled spokesmen that the act makes the board responsible to Congress for a sound air transportation system, with jurisdiction over all air carriers. They clearly indicated their belief that some economic control is essential and that a few guidelines "to help define the rules of the game" will be in the public interest and of benefit to legitimate operators in protecting them from responsible competition and in giving them an official status before the public which they do not now possess.

Regardless of overwhelming testimony of non-scheduled aviation spokesmen against any change in the present exemption order, it is obvious the board did not receive from the oral argument any answers to its fundamental question of definition of non-scheduled operators, which were more intangible to it than the exonerates' and

## Council's Comment

Following are public council's recommendations to CAB on the question of regulation of non-scheduled air services.

1. That the present exemption order be repealed.

2. That a new method of exemption of non-scheduled air services be adopted: (a) Establishment of a classification such as "non-certificated air carrier" in which classification a carrier would qualify by filing a simple notice, certain periodic informational reports and forwarding adequate liability contracts satisfactory to the Board. Carriers of passengers and property should be treated the same with the possible exception of exempting the owner-operator of one or two planes in the all-cargo field; (b) The only special restriction for non-certificated air carriers would be that the carrier could not operate over 10 round trips per month up to 500 miles and five round trips per month over 500 miles.

## The ATA's recommendations

**Board Attitude**—Mr. Branch at one time revealed the board's thinking when he asked an industry spokesman what objection there could be to changing the present exemption order to permit regulation in small degree with few restrictions, building up a regulatory system from time to time as an industry pattern de-



## UNUSUAL FREIGHT FLIGHT

Increasing volume of business is reported by Air Cargo Transport, Inc., which operates out of recently reopened Newark, N. J. Airport. Each shipment of 20 special chests to Mount International Airport, New Orleans, was among unusual flights handled by the former non-scheduled operator. Above, Airman Klumpp, Newark Watch Co. official, stands with Capt. Tom Davis, former NATS pilot, a special watch for New Orleans Mayor Robert S. Moen. It was delivered at the end of the flight which was said to have been the first commercial cargo delivery into the new field which is to be opened next month.



**CONTINENTAL DIAMOND**

**ENGINEERED**  
*Electrical  
Insulating Materials*

Many of the advances made in Electronics for War Radio, Radar, Communications and

**ENGINEERED**  
*Electrical*  
*Insulating Materials*

Many of the advances made in Electronics for War Radio, Radar, Communications and Control equipment will be incorporated in home and auto radio broadcasting and reception. C-D has developed many new grades of its standard Engineered Electrical Insulating Materials to meet the requirements of these engineering advances.

The part shown is a specific DIRECTO parting. It met the engineering specifications calling for a high strength, strong enough to mount several carrying parts, and resist abuse internal and external.

**C-D PRODUCTS**

**Plastics**  
**NYC 2**—A Lustrous Phenolic.  
**NYC 28**—A Molded Phenolic.  
**NYC 30**—A Pure Benz Plastic.  
 Especially Suited to U. S. F.  
 Insulation.  
 Chemical Equip-

**The NON-Metallic  
DIAMOND Valueless Trade  
MARK—Eagle Impregnation  
is Here.**

**DUCTS**—Buffy Miles  
and Associates

### Electrical Variables

Available in standard sizes,  
Rods and Tubes, and Full  
Fabricated, Insulated or  
Uninsulated.

Modelled on the *Journal of the American Musicological Society*, *Journal of American Musicology* is devoted to the study of American music in all its aspects. The Journal publishes original research, critical editions, and book reviews. It also includes a section on "American Music in the World."

Tuition of 1000

and. **Inventory Data**  
**Products: Individual &**  
**also Available.**

The C-D technicians who have worked to develop better Dielectrics to meet Wulfsberg's requirements, are now ready to help you solve your electrical insulating problems. Their familiarity with 4 distinctly different types of electrical insulating materials assures you of unbiased recommendations.

#### ARTIST CREDITS

NEW YORK 17 • CHICAGO 18 • DENVER 19  
(ESTABLISHED IN 1914) OFFICE IN PRINCETON, N.J.

with COAST REPRESENTATIVES

San Francisco 3  
•  
St. Carlos

DIAMOND PLATE PRESS CO. OF CANADA, LTD., TORONTO, CANADA

\_\_\_\_\_

FREE COMPANY

## Continental - Diamond FIBRE COMPANY

Established 1895... Manufacturers of Laminated Plastics since 1913—NEWARK 4 • DELAWARE

## ATA Approves Recommendations To Curb Non-Scheduled Service

Urges carriers be tied down to home-base flights except for occasional trips elsewhere but concedes CAB can make exceptions in hardship cases.

Air Transport Association approves examiner recommendations that the designation of non-scheduled air carriers, who should remain partially exempt from the Civil Aeronautics Act, be replaced by a classification of fixed base operators, and which is not rendered periodically and frequently between any designated points. These characteristics are of sufficient substance to justify separate classes of air carriers," Dunsen said.

The domestic certificated airlines also approve of the controversial suggestions of the examiners and public counsel that such

operators would limit commercial trips to those originating or terminating at the headquarters base, with the exception of a "one-way" causal and infrequent flight between other points.

➤ **Leeway**—With respect to any "reasonably direct" certificated, scheduled air service, AFA also agrees with the examiner that individual operators will accept a "lesser than 10 round trip" AFA.

**L**eapfrogs, it would be argued, Dorned said, "that the carrier must hold out, by advertising otherwise, four factors: (1) that he will operate as airline, (2) between designated points, (3) at least once a week, and (4) that he carry persons for hire." Because the grammatical construction thus it could well be argued by operators of aircraft that they could hold out firms of their bus would be true, even if they did not hold out the fourth.

Durned left a loophole in his argument, indicating ATA expected some unusual cases, when he conceded that a regulation based on frequency of trips may not be fair to some carriers. He said, "It is possible that some carriers are better than others. According to the JCC Bureau of Motor Carriers there still are 20 motor carriers which this bureau cannot classify, though the Motor Carrier Act was passed in 1935."

unborn between the certificated and uncertificated carriers on a basis of scheduled or unscheduled is illogical and to be found nowhere else in transportation.

**D**istinction—“The basic distinguishing characteristic (from the certificated carriers) of the so-called non-scheduled air carriers is that they render service which is not regular, continuous or direct, from air stations by claiming that anyone—whether veteran or not—could still operate from his base, provided he limited round trips between airline points.”

ATA approves the examiners'

suggestion that carriers must file a notice of intent to operate, containing name and address of the carrier, his citizenship, principal place of business, and description of services, plus such periodic reports as may be prescribed. Successful applicants would receive air carrier operating certificates pursuant to Part 42 (safety) of the FAR.

**Other Points**—In addition, ATA recommends:

h (1) To permit the Board to endorse in detail a proposed or existing operation which appears not to meet the requirements for partial exemption, the application should specify that the operation is operationally self-contained or coordinate, unless within 30 days of the date of filing of the notice of intent to operate the Board takes action which would result in interrupting or suspending the operation. The Board may also require that the operation be similar to that afforded certificated air carriers seeking to perform non-stop services.

[illegible]

• AFA considers that requiring such information would work as a disincentive on the applicant.

• AFA suggests that the periodic reports prepared by the companies should include a standard simplified system of accounts providing the following information on a periodic basis, perhaps quarterly, a periodic statement of income, balance, (perhaps profit) and any changes in assets.

Indiana Air Trade Unit  
Schedules Elections

The reactivated Indiana Aircraft Trades Association, made up of aircraft service operators in the state, will elect officers January 23.

Darmstad since 1941), the organization now is headed by Lt. Col. Walker W. Windsor, head of the state CAP wing and superintendent of West Cook Municipal Airport.

## Land Likely To Be ATA Head; Ramspeck Made Vice-President

Maritime Commission chairman's resignation reliably reported already at White House; Georgia Representative will be organization's executive director after leaving Congress Dec. 31.

By MERLEN MICKEL

Selection of Rep. Robert Ramspeck as executive vice-president of the Air Transport Association at the annual directors' meeting last week raised speculation as to the organization's presidency, now vacant, with Chairman Henry S. Land of the Maritime Commission the most likely choice.

The retired vice admiral, who had not assumed his current post, and had signed as contract. But reliable reports were that his withdrawal from public life to take the ATA post already had been intimated to the White House, and there was further good reason to believe that announcement of his election to head the Association will come towards the end of this month.

**Changes Made**—Definitely in prospect was some kind of ATA reorganization, probably shortly after the first of the year. It seemed likely that Land would emerge as president, with two

vice-presidents working with him. One of these, of course, would be Ramspeck. C. Rode's Moore, Pennsylvania—Central president, now is ATA vice-president.

Ramspeck, who in any event will be the organization's chief administrative officer, as a Georgia Democrat. He will take the new job Jan. 1, resigning his seat in Congress Dec. 31, although his resignation will go to Georgia's chief executive earlier in order that an election may be called to provide a successor. The Congressman attended both meetings of ATA's Board of Directors last week.

**Surfaced Earlier**—Some Ramspeck is a member of the Merchant Marine and Fisheries Committee of the House, which is on record in favor of shipping company participation in air commerce, and Admiral Land has been a strong advocate of such a step, the selection of both for key posts

### Board Changes

Two changes in the Board of Directors of the Air Transport Association were made last week. W. A. Patterson, president of United Air Lines, was re-elected after several months' absence from the directorate. C. E. Woolman, Delta Air Lines' vice-president, was elected to the board.

Members who continue into the new year are C. B. Smith of American, Capt. Eddie Northrop of Boeing, F. B. Wallace of TWA, C. J. Smith of PCA, and Civil Engineer of Northwest. Patterson succeeds Paul Collins of Northwest, and Woolman replaces T. E. Smith of Braniff Airways.

in ATA would be of more than usual interest to an industry that has resisted strongly any encroachment by surface carriers.

It should be pointed out, however, that Ramspeck's duties as chairman of the House Civil Service Committee have kept him so busy that he has rarely been an attendee at Merchant Marine. Nor does he recall being on record on the shipping issue. The report in which the committee recommended participation came from the committee as a group, and Ramspeck did not recall attending the meeting which resulted in the report (AVIATION NEWS, Dec. 4, 1946).

**Compromise**—Some observers feel, on the other hand, that a compromise between the airlines and the shipping companies may be in the offing. They point to the fact that Land, highly regarded in the shipping industry and for his administrative ability, is strongly backed for ATA's top spot by C. B. Smith, chairman of the board of American Airlines and a strong advocate of unified effort.

With air transport expanding rapidly internationally, the carriers in that field will need ticketing agencies throughout the world. Such agencies have been established by the steamship companies. Furthermore, the latter are said to be preparing for a drive soon after the first of the year for amending legislation that will allow them the air question they hitherto have been denied by the Civil Aeronautics Board's interpretation of the Civil Aeronautics Act.

**Question**—Here the question immediately arises as to what distinction can be drawn then to keep the railroads from similar participation, also opposed by the airlines.

Ramspeck's knowledge of legislative processes in Congress will be of value in his new job. In addition, he is more familiar than any other man in Congress, some of his friends say, with personnel in government departments. Particularly in this line of the Post Office Department. He was secretary of the Chamber of Commerce in his home town of Decatur, Ga., at the edge of Atlanta.

**"Blow to Congress"**—A Washington newspaper described his resignation as a "blow to Congress as he was widely recognized as its leading authority on Federal personnel and related matters." He was elected to Congress in 1928 and has been re-elected at each succeeding election. Among important measures he has sponsored into law is the Ramspeck-Hawley act of 1934, which brought to first, and still class postmastercies into the Civil Service system. He is a former practicing attorney in Georgia and state legislation, and in Washington worked in the House position and as secretary to a member of Congress before he returned to his home to run for Congress in Georgia's Fifth district.

## Washington National Funds Approved

A \$2,988,000 appropriation for the Washington National Airport, approved by the House Appropriations Committee last week, will implement the first phase of a \$16,000,000 post-war expansion program planned by Heryey Law, airport administrator.

The appropriation approved last week is the first deficiency appropriation bill will provide for extension to the south end of the terminal building, at an estimated cost of \$665,000; four additional hangars, \$2,223,000; land for, and planning of, a \$750,000 access road to the airport. The 1946-47 fiscal year estimate, \$200,000.

**More Space**—The terminal building extension is being built to give two domestic operators—United Airlines and TWA—more adequate space, and provide accommodations for three new airline operations—by Colonial, and by TWA



DC-4 MOCKUP AT TCA:

Trans-Canada Airlines pilots are working with the DC-4 mockup at TCA headquarters at Washington in preparation for use of this type of ship somewhere before the end of next year. The aircraft one to be built in Montreal of government-owned Canadian, Ltd., along with an RCAF transport version of the C-47.

and Pan American International routes.

Commitments for rental of the four new hangars to be constructed have already been obtained. Law reported, from United, Colonial, TWA, and American.

**Funds Cut**—Law disclosed that

### Mail Underestimated

An underestimate by the Post Office Department of the volume of domestic airmail during the 1945 third year—which ended last July—constitutes a deficiency appropriation of \$105,000, Robert Bergin, superintendent of the division of airmail service, notified before House Appropriations Committee last week, in connection with the first deficiency appropriation bill.

In drawing up its 1946 fiscal year budget early this year, the Post Office calculated a 1945 deficiency sum based on an underestimated volume of domestic airmail which was 35 percent over the 1944 fiscal year volume. It has now developed, Bergin said, that the 1945 fiscal year volume of domestic airmail was approximately 45 percent over the previous year.

The Budget Bureau clipped \$200,000 for a fifth hangar from appropriation requests. Although he pointed out to the House committee that the fifth hangar would pay for itself over a period of years, the item was not retained in the appropriation bill.

The \$16,000,000 post-war development plan portrayed by Law is the House Appropriations Committee would convert the airport into a self-sufficient town.

**Program**—Included in Law's plans for future construction are:

- A combination hotel-apartment to house permanent employees of the airport, and supply overnight accommodations for air travelers;
- A garage with complete repair facilities;
- Warehouses for use of the airlines.

- A shopping center, at present, employees of the airport unable to get to downtown Washington during shopping hours.

- An exhibition building, illustrating developments in aircraft technology, with showrooms "which could be rented at fairly high prices." Some small planes could also be exhibited.

- Law pointed out that all of the expansions planned for the airport will bring in substantial revenues



WHERE THE ARMY OVERHAULS C-54'S:

These overhaul docks at Morris Field, near West Palm Beach, Fla., are the 900-hr. destination for the Army's C-54's. Each dock has its own power supply and is equipped for night work. Capacity is 36 planes. The planes fly in with veterans destined for discharge, and exit with Air Transport Command equipment.

## CAA Would Hold Advances In Electronics For Future Use

Policy calls for precision instrument landing system to be pushed to full completion first, keeping new methods in reserve; ATA, Arinc and most airlines agree.

By BLAINE STUBBLEFIELD

Basic advances in electronic navigation facilities will be held in reserve for the future, if CAA's go-ahead policy can be carried out, while the present instrument landing system is pushed to completion.

In pre-war years, as many instrument approach systems were advocated by different groups that actual adoption and development of one system could not be started until the President finally called for a decision.

**New Dispute**—Now, the temptation to switch to new developments is at hand again, with government and private research progressing rapidly in radar and other applications of radio to air navigation, but an apparent majority of persons concerned are determined to resist it.

CAA, ATA, Arinc, and most airlines feel that it will be better to go ahead with the partly completed system which is judged to be good, than to change and spend many years waiting for something better. Meanwhile, of course, all their research facilities are working on fundamental improvements

which some day will replace present instruments and techniques.

**Progress**—Aeronautical Radio estimates that the entire domestic air fleet will be fully equipped with VHF airborne approach instrumentation by next September. CAA officials believe that by 1950 the present 300 air mail and passenger stages will have doubled to 600 and that about 160 of these will have instrument landing

### CAA's VHF Program

Here are the major items on the Civil Aeronautics Administration's VHF program at its Washington laboratory.

- ▶ Continuing development of the localizer transmission.
- ▶ Working on subfunctional range.
- ▶ Writing specifications to be followed by crews locating VHF range transmitter area.
- ▶ Continuing work on two course directional range.
- ▶ General radar research program, with emphasis on a critical lower warning screen.

ground facilities in service.

How many of these stations will require more than one instrument-equipped runway will depend upon interim progress with several leading ones, reverse-slit lighting, propellers, and other factors. During minimum visibility, the wind is below 5 mph, more than half the time, and most higher winds during the other half are uniform in direction. There is presently no plan to use portable ground stations, which would make all runways available, because they get out of adjustment readily.

**Other Equipment**—The T-5s are fully equipped with 75-megacycle fan marker receivers. All except recently-acquired airplanes are equipped with RC-533 localizer receivers, procured during the war. This receiver has been standardized by CAA. Only two Army-Navy ARN-8A glide path receivers are in hand as yet. One of these is at United Air Lines laboratory, where setting is completed and certification is expected at the Procurement from military surplus will not be substantial until New Year.

Both glide and localizer receivers require modification for civilian use. Neither was exactly what the operators wanted, and new production will be somewhat changed. Some surplus planes being delivered to the airlines are equipped with both receivers, but no advantage is gained because they have to be taken out and modified. The entire airborne approach instrumentation—localizer, glide, marker, and directional receivers—is designated SCB-61.

**Modifications**—The airlines also have 200 communications circuit receivers now going through a modification center in Washington. These are the ARC-1 Army-Navy 25-watt type, already certified, and the 12-watt type combination, which will soon be approved. These 200 units were obtained by Arinc direct from the Navy.

Total of 32 CAA IIP ground stations (Aviation News, July 24, 1944) are now programmed. Twelve CAA stations are working, 10 are being installed. At one in CAA's 1944 plan, and funds for 30 in 1947 have been budgeted. In addition 27 have been completed for the Army, plus five in process. Navy is getting 1950, use a combination. More many of the instrument-equipped Army fields will become available to commercial

flying can not be determined as yet.

**Approach Aid**—Projected installation of 30 direction-finding stations at 12 major airports by CAA is provided merely as an aid to instrument approach in the winter's weather. Most airline planes have direction receivers. The transmitter to be used are Army surplus.

It is possible that direction finding instrumentation will justify permanent and expending installation. Many pilots find it an invaluable supplement to local range facilities.

It consists in most cases of two ground transmitters on which the pilot uses his direction compass to line up with the runway, or to check his localizer line-up. Runway lights, with the direction finder, are needed by many airlines as excellent approach facility in themselves for most landings.

## Improved Controls Outlined By Gilbert

Developments in store for air traffic control in the immediate and very distant future have been outlined by Glen A. Gilbert, chief of Civil Aeronautics Administration's Air Traffic Control Division.

Among more immediate improvements contemplated:

- ▶ Consolidation of VHF ranges with visual indication of desired track as basic means for navigating over land areas, such as con-

### C-54-B Allocations

Thirty-one Douglas C-54-B's were divided among domestic and foreign airlines in the first allocation of surplus transport aircraft by War Relocation Authority, announced a few days ago.

Twenty-seven went to U. S. lines, as follows: five each to Pan American and Eastern; four each to United, American and TWA; two to Western, and one each to Braniff, Delta and Chicago & Southern. Two of the four allocated to foreign lines went to Panair do Brasil, and one each to Aerovias Nacionales de Colombia and Compañia Mexicana de Aviacion.

Essential U. S., where traffic is highly congested.

Long range navigation over water or thinly-populated land now accomplished chiefly by direction finders, using high-powered unidirectional radio beams on ground or vessels.

Use, as basic navigation and at airports, of instrument landing systems with radio-beam localizer and glide slope.

Communication by voice where language permits, with radiotelegraph in suitable codes used in many cases.

Application of radar screens in control towers.

**Objectives**—Among ultimate objectives are:

- ▶ Elimination of the voice as a me-

dium of communication.

▶ Removal of human element through use of automatic devices.

▶ Establishment of facilities and development of procedures to permit traffic flow during instrument flight in same volume and frequency possible during contact flight.

**Methods**—Various methods of accomplishing these objectives, intermittently as well as definitively, are under consideration.

They involve use of a collision warning device known as a "vertical separation indicator", automatic communication equipment on the ground for exchange of flight data between centers and between centers and towers; and automatic transmission of traffic control instructions directly into the cockpit, possibly by means of an indicator utilizing a system of lights or by several revolving drums electrically actuated to form desired codes.

### Canadian Data Issued

The Canadian Air Transport Board has issued a directive for the filing of schedules of air carriers licensed to operate commercial scheduled flights.

The directive contains full data on how to file schedules, provision for operation of extra flights or additions of sections to regular flights when heavy traffic requires, the printing of timetables, and the forwarding of information to connecting airlines and the post office department.



### FLYING CARPETS:

Three rolls of broadloom carpet from a New York mill are shown being loaded for flight by Air Transport Command C-54 from La Guardia Field to Hartsfield Field, New Orleans, where they were assigned to the Non-Consummated Officers club. The load was described as the first large shipment of carpet by air to a foreign country.



### DISCUSS AIR FREIGHT POSSIBILITIES:

Armed "great experts" at a recent Pacific Coast air freight forum sponsored by the Oakland, Calif., Chamber of Commerce Airline Committee were, left to right, seated, Dall De Waze, San Francisco district traffic manager, American Airline; Ernest C. Michle, western region cargo traffic manager, American; James Greenwood, cargo division, United Air

Lines; Charles Greese, cargo division, TWA; and Ed Smith, traffic division of United. Seated behind them were: William Mitchell Corbett, cargo division, TWA; J. F. Hauler, Consulate chairman, and Curt Hamilton, cargo division, Pan American. West Coast grocers, shippers, manufacturers and county and state agricultural activities also attended.





## The Budget Bureau and Aviation—II

Our week's discussion on this page of the Budget Bureau and its importance to aviation stressed the tremendous power of the Bureau over all facets of aviation, the impractical, unrealistic and arbitrary nature of many of its decisions on aviation budget items and aviation legislation, and the plea for an end to the unhelpful and unnecessary use in which the public, aviation industries and Congress have held Budget Bureau action.

With the end of the war and return of full control of money budget items from the military services to the Bureau, aviation must expect renewed attempts by the Budget Bureau to extend its control even further.

These comments are not made in denunciation of a hard working staff in the Budget Bureau, but they are made in an attempt to convince us that we must scrutinize the Bureau as critically, as we do our friends at CAA, CAB, State, Commerce, Army, Navy, NACA, and Congress.

We must remember that the Budget Bureau makes many decisions and interpretations, necessarily without consulting the President, and that, therefore, all Budget action should not be interpreted as inflexible or as having come direct from the President. A political scientist would reject this thesis as a basis for action, but a resident of Washington will accept it as realistic advice.

One agency, which must remain unnamed, had a vital project which the Budget Bureau disapproved. An appeal to the top Budget Bureau authorities also failed, and the agency was thus unable to send its request to Congress. One of the agency heads finally went to the President, explained the project and the history of the case, and promptly received a memorandum to the Budget Bureau ordering approval of any budget the agency deemed necessary.

We must remember that the Budget Bureau is a small agency. It cannot possibly know everything about all things. Certainly, it cannot be an authority in aviation. It has no aviation section or unit or, as far as can be learned, even a single full-time specialist in aviation. It does maintain a continuing study in transportation, in which aviation still is considered as a luxury means of transport, and subsidiary to older modes. Its staff is quoted as favoring the placement of aviation regulation in some single transportation agency such as the ICC or a new consolidated

body. It is obvious that such action would result in control of not only the air transport industry but perhaps even the non-scheduled operators and private flying by men who are essentially railroad men. The threat of a single transportation agency is very real.

With the end of the war, the day is over when the Budget Bureau approves automatically all military requests. Yet we seem convinced, as a nation, that we must never again be unprepared for war. Furthermore, as the emphasis returns to commercial aviation we must expect to see more and more restrictions attempted by the Budget Bureau. By constant lack of vision and a negative policy of cost-cutting, it can become the No. 1 enemy of an expanded post-war commercial and military aviation demanded by the people. It is lagging far behind public opinion, stressing theories which cannot, in themselves, be criticized, but which are depressing aviation because they are not based up with realistic appraisal of today's rapidly moving developments and what they will mean tomorrow.

These editorials are not arguments for padded payrolls or pork barrel legislation. But it does seem that too often the Budget is being used, as far as aviation is concerned, more to save money than to spend wisely. Character of public expenditure changes greatly during a country's development. The public demands from its federal government maximum benefit from every new service which attains utility and makes possible a better life. Even the Budget Bureau's personnel will concede that economy and efficiency are not synonymous. Mere retrenchment or rigidly increases in budget, without consideration for the value of the return, never assure better public service, or security.

We have still another reason to demand that Congress, our elected representatives, act independently of the Budget Bureau in aviation matters, whenever necessary. But by the law of the land aviation is not merely another activity to be regulated. For our Civil Aeronautics act is the only law in transportation which orders the Civil Aeronautics Administration and the Civil Aeronautics Board not only to regulate, but to foster, encourage, and develop.

This unique datum we should never forget, nor allow Congress itself or others to forget.

ROBERT H. WOOD

*Almost every American  
benefits every day  
from the products of*  
**BORG-WARNER**



A NATION ON WHEELS depends heavily on Borg-Warner. Here James Bevan paints his impression of the Borg & Beck plant in Chicago, the world's largest maker of automotive clutches.

The 28 plants that make up Borg-Warner produce not only complete products, but parts that are essential operating equipment in many other industries.

For example, Borg-Warner products are found on America's farms, in airplanes as well as in 9 out of 10 makes of automobiles. And Neoprene refrigerators, ranges, washing machines and other

home appliances make the houses of millions more efficient and livable.

There are many new advances at Borg-Warner about which you will soon be hearing. Some of them will contribute to your industry. For Borg-Warner's engineering and large-scale production are continuously working with you to "Design it better, make it better."

Partners with the Aviation industry from the start, Borg-Warner parts today are necessary in 9 out of 10 airplanes.



TRANSMISSIONS • GEARBOXES AND POWER-TO-GEAR  
GEARBOXES • CLUTCHES AND POWER-TO-GEAR  
GEARBOXES • CLUTCHES AND POWER-TO-GEAR  
GEARBOXES • CLUTCHES AND POWER-TO-GEAR  
GEARBOXES • CLUTCHES AND POWER-TO-GEAR  
GEARBOXES • CLUTCHES AND POWER-TO-GEAR  
GEARBOXES • CLUTCHES AND POWER-TO-GEAR  
GEARBOXES • CLUTCHES AND POWER-TO-GEAR

Makers of essential operating parts for the automotive, aviation, marine and farm implement industries, and of Norge home appliances... Borg-Warner products are found on America's farms, in airplanes as well as in 9 out of 10 makes of automobiles. And Neoprene refrigerators, ranges, washing machines and other home appliances make the houses of millions more efficient and livable.

# Nearing the speed of Sound with **TIMKEN BEARINGS**



When the world's fastest airplane, the P-80 Shooting Star zooms into space, it comes closer to the speed of sound than any plane ever built.

And when it returns to earth again, it settles down as safely and surely as possible on landing wheels equipped with the world's best — matchless bearings made by Timken.

The reasons for this pre-eminence are not hard to find. Unique engineering skill and

experience, the most precise manufacturing methods, and unexcelled Timken Electric Furnace Alloy Steel are only three of them —and there are many more. Our engineers will be glad to give you full details and make specific recommendations to meet your need. Why not write?



THE TIMKEN ROLLER BEARING COMPANY, CANTON, OHIO